राअप्रस
NIAM

राष्ट्रीय अजैविक स्ट्रैस प्रबंधन संस्थान

(डीम्ड विश्वविद्यालय)

मालेगांव, बारामती–413115 (पुणे) महाराष्ट्र, भारत

National Institute of Abiotic Stress Management

(Deemed University)

Malegaon, Baramati-413115 (Pune) Maharashtra, India

भाकृअनुप
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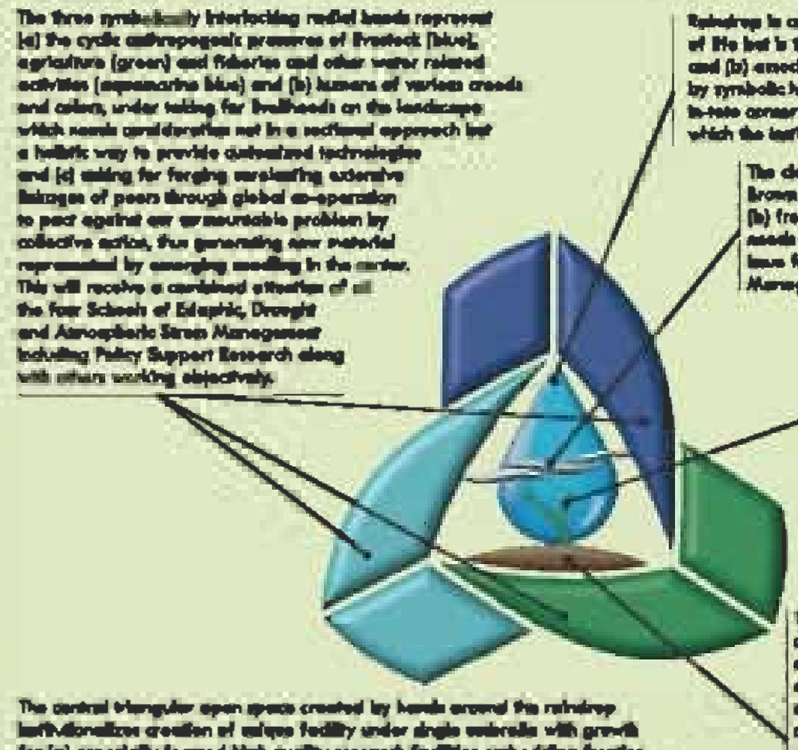
First Annual Report
2009-10

About Logo

A logo is founded on the pedestal of background of the National Institute of Abiotic Stress Management (NIASM) on which it is created and envisaged mandate alerting concerns and issues ranging from current to future in agriculture, livestock and fisheries justifying the formulation of a dedicated management institute for abiotic stresses. At this institute, the four schools of Drought Stress Management, Atmospheric Stress Management and Edaphic Stress Management and Policy Support Research interact to improve the life ameliorating the impinged stresses and others invading in various related cycles sustaining the human life. This philosophy is conceptualized in the logo in succinct manner.

The symbols embody are the elements of



The set goal, then of the NIASM, is to develop an invincible theory to model using frontier sciences and techniques for building flexible farming systems encompassing agriculture, livestock and fisheries sustaining most of the resources matching several aspirations, to practice and refine the system as a participatory mode, and finally to accomplish profitability from adopted livelihoods on the system by the farming communities on an abiotically stressed landscape under changing climate scenario.

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भाकृअनुप
ICAR

First Annual Report
2009-2010

प्रथम वार्षिक प्रतिवेदन
२००९-२०१०

राअप्रस
NIAM

राष्ट्रीय अजैविक स्ट्रैस प्रबंधन संस्थान
(समतुल्य विश्वविद्यालय)

मालेगांव, बारामती–413115 (पुणे) महाराष्ट्र, भारत

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Director

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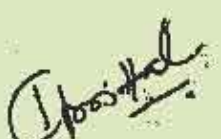
Preface

Recognizing the importance of influence of climatic change on the already mounting adverse effects of abiotic stresses of climate, water, edaphic factors etc. on various sectors of agriculture, horticulture, livestock, fisheries, birds, etc., on 19 January 2009, the Union Cabinet approved the establishment of National Institute of Abiotic Stress Management (NIAM), a deemed-to-be university.

Its foundation stone was laid by Shri Sharadchandraji Pawar, Hon' Minister of Agriculture & Consumer Affairs, Food & Public Distribution, GOI on 21 February 2009, at Malegaon Khurd, Baramati, Pune District (Maharashtra) in the presence of several dignitaries from the Indian Council of Agricultural Research, Ministry of Agriculture, Members of parliament, Government of India, and Ministers and Officials of Government of Maharashtra, and others gathering to more than seven thousands. This is a 'Dream Project' of ICAR; you sure will note in the inside pages.

This is First Annual Report on establishment of National Institute of Abiotic Stress Management (NIAM). It is introductory in nature providing history, organization, expectations, activities and others in view of its wider reach. The staff started joining the institute from the second fortnight of August 2009.

Presently, the infrastructure development is in progress. Academic leanings are under initiation. A few review meetings held by the Hon' Minister of Agriculture & Consumer Affairs, Food & Public Distribution, GOI and Hon' Minister of Energy and Water Resources, Government of Maharashtra will be in memory forever. The support of the Secretary (DARE) and Director-General (ICAR), Additional Secretary (DARE) and Secretary (ICAR), and Deputy Director-General (NRM) are note-worthy at every point during this phase. A special mention may be made on the conscientious support of Director (Works). The generous support of Government of Maharashtra is always well-remembered. The multifunctional team spirit of my colleagues is the breath of this endeavor despite their personal difficulties. They are always dear to my heart. Being first in the series of new national institutes being established by the Council, early success of this dream project is eagerly awaited.



(KPR Vittal)
Director

Executive Summary

Perceiving the importance of influence of climatic change on the already mounting adverse effects of abiotic stresses of climate, water, edaphic factors etc. on various sectors of agriculture, horticulture, livestock, fisheries, birds etc., on 19 January 2009 the Union Cabinet approved the establishment of National Institute of Abiotic Stress Management (NIAM), a deemed-to-be university. Its foundation stone was laid by Shri Sharadchandraji Pawar, Hon' Minister of Agriculture & Consumer Affairs, Food & Public Distribution, GOI on 21 February 2009, at Malegaon Khurd, Baramati, Pune District, Maharashtra in the presence of several dignitaries.

Abiotic stresses are natural. They are borne in atmosphere (temperature -heat, cold chilling; frost; radiation - UV, ionization; others; gasses - CO_2, and other green house gases), water (drought, flooding/hypoxia, sea water inundation etc.), soil (salinity, alkalinity, sodicity, acidity, waterlogging, declining water quality etc.), chemicals (mineral deficiency/excess, pollutants, heavy metals/pesticides, gaseous toxins etc.), mechanical (aerosols, wind, soil shifting etc.). They occur in multiples and affect all the sectors of agriculture - crop, livestock and fisheries. With impending climatic change, addressing of multiple abiotic stresses comprehensively is the need of the hour. Not only now to hasten the pace of research but also initiate high quality research programmes of global standard, it is essential to consolidate by adopting frontier molecular, biotechnological, nanotechnological and other tools to develop genetically stable crop, livestock and fisheries on the strategic platform of resource management. Since the completion of the genome projects, however, the focus of biological research is shifting from the functions of individual genes to behaviors of complicated systems that emerge from the interactions of a multitude of factors. These recent developments necessitate the promotion of a combination of approaches collectively called "Systems Biology."

Multi-disciplinary teams will be required to work together for quicker results in the emerging field of research. The institute will conduct research programmes through four schools- Drought Stress Management, Atmospheric Stress Management, Edaphic Stress Management and Policy support Research, by undertaking cutting-edge research in frontier areas. These efforts also will amalgamate technological advancements taking place universally. The intermediate products generated of tolerance to multiple stresses will be made use by other institutes to develop end products. Conjunctively, it builds up human resources through education and capacity building to address the challenges in a new mode. The institute will strongly complement the ongoing R&D under National Agricultural Research System (NARS) without proliferating into other new institutes.

This year was practically the starting point of foundation for the scientific and other activities of the institute starting the incumbents joining in almost end of first half of the year. Chronology of events of formation of the institute is given. During this year, the institute was active in liaison of basic works for infrastructure development. The Government of Maharashtra has generously given 56.49 ha of land for the institute, and deposited funds for acquiring 4 ha of land from MIDC and 10 ha land from farmers. The prioritized items under works are bore well, electric connection, boundary wall, and workshop shed for housing the temporary office. The logo of this institute is prepared and under improvement. A video on the institute initiation and profile is in progress. Efforts were initiated to prepare a map of abiotic

stresses in the country with the present available information. A farm plan of one ha plots. Available research information on the abiotic stresses on internet was being put in a data base for intranet use. Thus the institute is developing a digital library by building a full text bibliographic database using free online documents from internet. The Specialized On-farm Research Laboratories need an exposure of the user scientist to facilities abroad to build state-of art. The purchase of equipment is also deferred awaiting initiatives on recruitment. Soil survey was conducted. Budget expenditure is 100% during this financial year.

The 'Vision' development is the primary task for academic and research activities. The focus and strategy of the institute was circulated by email to about a thousand persons and put on FAO website 'solutionexchange-un.net.in', and institute website 'niam.res.in' etc., with little effect. Now pending the infrastructure getting ready, the NIAM proposes to initiate Research at the earliest on Abiotic Stress Management with leading National/International participation outcome. Several meetings in National agricultural research system and outside are planned.

संक्षिप्त सारांश

बदलती जलवायु के प्रभावों के परिपेक्ष्य में पहले से ही विद्यमान अजैविक तनावों जैसे कि बदलती जलवायु, जल, पारिस्थितिकीय घटकों, आदि के कारण के कारण कृषि के विभिन्न क्षेत्रों जैसे कि बागवानी, पशुधन, मात्सियिकी तथा पक्षियों आदि के उत्पादन में आई कमी को देखते हुए केन्द्रीय कैबिनेट ने बारामती के मालेगाँव खुर्द में राष्ट्रीय अजैविक स्ट्रैस प्रबंधन संस्थान की स्थापना की घोषणा की, जिसका स्तर एक विश्वविद्यालय के समतुल्य है। इसकी नींव के पत्थर की स्थापना माननीय श्री शरदचंद्र जी पवार, केंद्रीय कृषि, उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्री, भारत सरकार, के कर कमलो से दिनांक 21 फरवरी 2009 को विभिन्न गणमान्य व्यक्तियों की उपस्थिति में संपन्न हुआ।

अजैविक तनाव प्रकृतिक हैं तथा वे वातावरण (तापमान, ठंड, ठिठुरन, कोहरा, विकिरण–अल्ट्रावायलट, आयनीकरण, अन्य, कार्बन डाई आक्साइड एवं अन्य ग्रीनहाउस गैसें), जल (सूखा, बाढ/प्लवन, समुद्री पानी का मिश्रण, आदि), रसायन (खनिजों की कमी/अधिकता, प्रदूषकर तत्वों/कीटनाशक, तथा जहरीले रसायन, आदि), यांत्रिकीय (एरोसोल, वायु, मृदा विस्थापन, आदि) सें ही उपजते हैं। जब भी वो (अजैविक तनाव) एक से अधिक मात्रा में होते हैं कृषि के विभिन्न क्षेत्रों जैसे कि फसल, पशुधन, मात्सियकी, आदि में अपने दुष्प्रभाव डालते है, तो इस सबको देखते हुए व इन सभी कारकों के सामुहिक दुष्प्रभाव को दृष्टिगत रखते हुए शोध की आवश्यकता है। केवल शोध कार्य की गति ही नहीं बल्कि उच्च गुणवत्ता वाले विश्वस्तरीय शोध कार्यक्रमों कीभी आवश्यकता है ताकि आनुवंशिक रूप से स्थाई पादप फसल, पशुधन एवं मात्सियिकी प्रजातियों का विकास किया जा सके। जीनोम परियोजना की समाप्ति के साथ ही, जीवविज्ञान मे किए जा रहे शोधों का केंद्रबिन्दु एकल जीन के प्रभाव से हटकर क्लिष्ठ निकायों की ओर केन्द्रित हो रहा है जो कि विभिन्न कारकों के परस्पर संपर्क में आने के कारण उत्पन्न होते हैं।

इन अध्ययनों को एक साथ जोडकर तथा विभिन्न क्षेत्रो में जैसे कि आणविक, बायोटेक्नोलोजिकल, नैनो तकनीक तथा अन्य उपलब्ध तकनीकों तथा उपकरणों आदि की मदद लेकर शोध करना है ताकि आनुवांशिक रुपसे स्थाई पादप फसल, पशुधन एवं मात्सियकी प्रजातियों का विकास संसाधनो का उचित प्रबंधन करते हुए किया जा सके। हाल ही में हुए विकास के कारण इस बात की ओर अधिक आवश्यकता हैं कि सामुहिक प्रयासो का एक साथ प्रयोग करके 'निकाय जीव विज्ञान' एप्रोच का उपयोग किया जाए।

विविध क्षेत्रो के वैज्ञानिको के दल को उभर रहे अग्रणीय शोध क्षेत्रो में सामुहिक रुप से आपस में मिलकर काम करना होगा ताकि द्रुत गति से परिणाम प्रप्त किये जा सके। यह संस्थान विभिन्न क्षेत्रो में अपने अग्रणीय शोध कार्यक्रमो का संचालन चार विभिन्न स्कूलो –शुष्कता तनाव/स्ट्रेस प्रबन्धन, वातावरणीय तनाव/स्ट्रेस प्रबन्धन, इडैपित तनाव/स्ट्रेस प्रबन्धन तथा नीति सहयोग शोध के माध्यम से करेगा। ये प्रयास संपूर्ण विश्व में किए जा रहे तकनीकी उपलब्धियो को अपने में सारगर्भित कर करेगा। उससे उत्पन्न हुए उत्पादो जो कि विभिन्न स्ट्रेसो के विरुद्ध प्रतिरोधक क्षमता वाले होंगे, उपयोग के लिये अन्य संस्थानो के द्वारा भी प्रयोग किया जायेगा। इसके साथ ही क्षेत्र मे आ रही चुनोतियों का सामना करने के लिए शिक्षा व क्षमता निर्माण के द्वारा उचित मानव संसाधनों का विकास भी करना होगा। यह संस्थान राष्ट्रीय कृषि शोध निकाय के अंर्तगत इस दिशा

मे कार्य कर रहे अन्य संस्थानों के कार्य मे बाधा डाले बिना व उसका अनुकरण किए बिना नवीन दिशाओं में अपना कार्य करेगा।

प्रायोगिक रूप से यह वर्ष संस्थान की वैज्ञानिक एवं अन्य गतिविधियों का प्रारम्भ है जबकि वर्ष के उत्तरार्ध में अन्य संस्थानों से व्यक्तियों ने संस्थान में नियुक्ति पर आना प्रारम्भ किया। घटनाओं के कम मे संस्थान की स्थापना कमवार दी गई ह। संस्थान का मुख्य कार्य भवन निर्माण तथा अन्य सुविधाओं का विकास प्रगतिशील है। महाराष्ट्र सरकार ने उदारतापूर्वक 56.49 हैक्टेअर भूमि संस्थान को दी तथा संस्थान के आवासीय परिसर के लिए चार हैक्टेअर भूमि के लिए धन महाराष्ट्र औद्योगिक विकास मण्डल को तथा शोध परिसर के लिए दस हैक्टेअर भूमि के लिए किसानों के पास धन जमा किया है।

निर्माण कार्य को दृष्टिगत रखते हुए संस्थान की में प्राथमिकताओं में पानी के कुए का निर्माण, विद्युत कनैक्सन, बाउन्ड्री वाल तथा वर्कशाप शेड जो कि अस्थाई तौर पर संस्थान कार्यालय के रूप में प्रयोग किया जाएगा. संस्थान का चिहन बनाया बनाया गया है जिसका संशोधन अभी प्रगति पर है। देश में स्थित विभिन्न अजैविक स्ट्रैसो के मानचित्रण का कार्य उपलब्ध सूचनाओं को संकलित कर किया जा रहा है। संस्थान के कार्यकलापों से संबंधित एक वीडिओ फिल्म के निर्माण का कार्य भी प्रगतिशील है। प्रक्षेत्र को एक हैक्टेअर के प्रक्षेत्र बनाकर योजनाबद्व किया जा रहा है। उपलब्ध सूचनाओं के आधार पर एक डाटाबेस का निर्माण किया जा रहा है। संस्थान ओपनसोर्स तथा इलैक्ट्रानिक रूप में उपलब्ध प्रलेखों का संकलन कर उनसे एक डिजिटल पुस्तकालय आंतरिक उपयोग के लिए विकसित कर रहा है। उपलब्ध वांगमयिक जानकारियों के आधार पर एक डाटाबेस का निर्माण भी संस्थान के पुस्तकालय में किया जा रहा है। संस्थान के प्रक्षेत्र में स्टेट आफ आर्ट प्रयोगशालाओं का निर्माण किया जा रहा है जिसके लिए विदेशों से भी जानकारियां एकत्र की जा रही हैं. शोध उपकरणों का कय संस्थान में वैज्ञानिकों की अनुपलब्धता के कारण अगले वर्ष के लिए स्थगित कर दिया गया है जबकि इस वित्तीय वर्ष में सौ प्रतिशत बजट का उपयोग कर लिया गया है।

संस्थान की शोध एवं अकादमिक गतिविधियों के संचालन के लिए उचित दृष्टिकोण के निर्माण की आवश्यकता है जिसके लिए संस्थान के दृष्टिकोण, इसके शोधों के केद्र बिन्दु की जानकारी संस्थान द्वारा हजारों विशेषज्ञों को ईमेल द्वारा भेजी गयी तथा खाद्य एवं कृषि संघठन की वेबाइट व संस्थान की वेबसाइट पर भी डाला गया । अब संस्थान का प्रतीक्षित संघठन धीरे धीरे अपने स्वरूप में आ रहा है तथा संस्थान के द्वारा रचित शोध कार्यकम राष्ट्रीय व अंर्तराष्ट्रीय स्तर पर परिणाम देने वाले होगें । राष्ट्रीय कृषि शोध निकाय के अंर्तगत अनेको सम्बन्धित बैठकें देश विदेश में प्रस्तावित हैं ।

Introduction

Especially in arid and semi-arid regions many researches in the three sectors of crop, livestock and fisheries on the influence and mitigation of the abiotic stresses of atmosphere (temperature - heat, cold chilling; frost; radiation - UV, Ionization; others; gasses - CO_2, and other green house gases), water (drought, flooding/hypoxia, sea water inundation etc.), soil (salinity, alkalinity, sodicity, acidity, waterlogging, declining water quality etc.), chemicals (mineral deficiency/excess, pollutants heavy metals/pesticides, gaseous toxins etc.), mechanical (aerosols, wind, soil shifting etc.) and a few others were made and are in progress. In view of impending climatic change, addressing of multiple abiotic stresses comprehensively is the need of the hour. Not only now to hasten the pace of research but also initiate high quality research programmes of global standard, it is essential to consolidate by adopting frontier molecular, biotechnological, nanotechnological and other tools to develop genetically stable crop, livestock and fisheries on the strategic platform of resource management.

By concentrating on isolation and functional analysis of genes, biological research has succeeded in producing considerable results over the past three decades. Since the completion of the genome projects, however, the focus of biological research is shifting from the functions of individual genes to behaviors of complicated systems that emerge from the interactions of a multitude of factors. These recent developments necessitate the promotion of a combination of approaches collectively called "Systems Biology." Due to advances in systems biology, structural biology, and breeding technologies based on genomic information, the ability to design biological functions is coming within reach. However, to truly comprehend the dynamics of the entire system, the complexity, which is generated by the interactions of many factors, must also be understood. To lead biology into a new era with a focus to mitigate or adopt multiple abiotic stresses, it is absolutely necessary to introduce a research approach that integrates molecular structural analysis, information theory, and mathematical analysis on the foundation of traditional molecular biology. To date, there are limited examples of such research based on understanding life processes as systems due to the lack of life scientists, who cover multiple disciplines. Nevertheless, systems biology, as defined above, will become a central field in the next-generation of life sciences in which all the sectors of agriculture will have the major benefit.

As expansion of the global population begins to cause increasing food shortages, demand is strengthening for greater yields of tastier, safer and more resilient crops. An example is a case study of developing tailor-made rice crops at Nagoya University, Japan.

Makoto Matsuoka, a professor of the Bioscience and Biotechnology Center, unveiled important genetic and molecular mechanisms in rice, and suggested new breeding methods that could lead to the development of tailor-made cultivars. In agriculture, the 'semi-dwarf' trait is important for increasing productivity by enhancing crops' resistance to wind and rain. Progress in molecular genetics now enabled researchers to discover that such dwarfism is due to mutation of the *SD1* gene. In 2002, Matsuoka's team reported that *SD1*'s role is to encode an oxidase enzyme involved in the biosynthesis of gibberellin (GA), a plant growth hormone. Matsuoka and his colleagues also isolated and characterized two key genes, *GID1*, which encodes a GA receptor, and *GID2*, which encodes a positive regulator of GA signaling. Loss-of-function in either results in GA-insensitive mutants. Binding of the GID1 receptor produces a protein complex and triggers various GA actions. The researchers built a

molecular model of GA signalling, which led to the discovery that the GID1 receptor could adapt to chemical compounds other than GA by replacing amid acids associated with the GA binding. Matsuoka says this finding could pave the way for developing new growth hormones. By picking out chromosome segments containing advantageous genetic information from a number of varieties, Matsuoka's team identified five genes responsible for grain counts. The researchers back-crossed two varieties of rice: the Japanese premium variety Koshihikari, and the much shorter Indian variety Habataki. They thus created a variety of Koshihikari that carried a Habataki gene and had a yield 30% higher than that for regular Koshihikari, and the taste remained unchanged. In their latest achievement, his team has reported the mechanisms of two genes that enable high-rise rice in South Asia to survive floods and keep standing in deep water. This can be applied to find more valuable traits from wild rice, and develop innovative varieties.

Multi-disciplinary teams comprising biotechnologists, plant biologists, agronomists, breeders, crop physiologists, soil scientists, meteorologists, animal scientists, fishery scientists, bioinformaticists, nanotechnologists, economists, sociologists, and many others will be required to work together for quicker results in the emerging field of research. The Institute will conduct research programmes through four schools- Drought Stress Management, Atmospheric Stress Management, Edaphic Stress Management and Policy support Research, by undertaking cutting-edge research in frontier areas. These efforts also will amalgamate technological advancements taking place universally. The intermediate products generated of tolerance to multiple stresses will be made use by other institutes to develop end products. Conjunctively, it builds up human resources through education and capacity building to address the challenges in a new mode. The institute will strongly complement the ongoing R&D under National Agricultural Research System (NARS) without proliferating into other new institutes.

Background

Abiotic stresses like drought, temperature extremes, floods, salinity, acidity, mineral toxicity, and nutrient deficiency are threatening agricultural, livestock, fisheries and others production globally posing challenges in sustaining even the current productivity levels, let alone further enhancement. Recognizing the magnitude of the problem, many countries have already initiated special research programmmes and even set up dedicated research institutes to embark upon the mitigation of abiotic stresses on production. Being a tropical country, India is more challenged with penultimate combinations of abiotic stresses spatially and temporally. The country is experiencing productivity declines due to droughts, floods, and high and low temperatures, etc. which are major limitations in maintaining food security. The climate change is resolutely expected to aggravate the adverse impacts of abiotic stresses further. Therefore, there is an urgent need to take up focused research on this important area in the National Agricultural Research System (NARS).

Although several research institutes of Indian Council of Agricultural research (ICAR) and State Agricultural Universities (SAUs) are working on abiotic stresses, the efforts are far too inadequate considering the magnitude of the problem. The research of tackling the abiotic stresses most of the times is on isolated lines, even though the multiple abiotic stresses occur in conjunction. Moreover, during the last decade, several new tools in the areas of biotechnology, nanotechnology, remote sensing, information technology, and polymer sciences have become available for application in crop improvement and production including soil and water management. Therefore, it is of national

importance to not only initiate high quality research programme which is of global standard in this important area, but also to capture, synthesize, adapt, and apply the technological advancements taking place outside the NARS. Conjunctively, it is also indispensable to build up human resources through education and capacity building to address all the challenges of abiotic stress management.

Intensity of Abiotic Stresses

In the world only 9% of the area is conducive for crop production, while 91% is under stress. This includes 24% under drought, 21% has got shallow depth, 21% is under mineral stress and 14% is under freezing stress and 11% is water logged. Added pressure is that global population is likely to reach 7 billion by 2025 and 10 billion by 2050. The area under stress is likely to increase further due to land degradation and urbanization. Thus agricultural production has to be increased from these lands that are under stress. The researches in stress tolerance and response are becoming increasingly important not only because agricultural production need to keep pace with increasing demand for agricultural produce from dwindling resources, but also due to possible changes in climate that may make the environment much more hostile for agricultural production than what it is today. Population growth is outstripping agricultural production. Similarly in India also 67% of the area is rainfed and crops in these areas invariably experience droughts of different magnitudes. Although in the country 33% of the cropped area is under irrigation, yet here also crop production is constrained by environmental stresses like thermal. Further due to climate change, the levels of stresses may further increase that may adversely influence the plant yield.

Forms of Abiotic stresses

The abiotic stresses like temperature (heat, cold chilling/frost), water (drought, flooding/hypoxia), radiation (UV, ionizing radiation), chemicals (mineral deficiency/excess, pollutants heavy metals/pesticides, gaseous toxins), mechanical (wind, soil movement, submergence) are responsible for over 50% reduction in agricultural production. Increasing industrialization is contaminating water and land with organics and heavy metals likewise increasing CO_2 and other green house gases in the atmosphere are increasing atmospheric temperature and UV radiation not only threatening crops, livestock but also human beings.

Mode of Research

Many researches on influence of these abiotic stresses on crop, livestock and fisheries have been made and are in progress especially in arid and semi-arid regions, but now to hasten the pace of research and focus, there is a need to consolidate these studies adopting frontier molecular, biotechnological and nanotechnological tools to develop genetically stable crop livestock and fisheries. Multi-disciplinary teams of scientists comprising biotechnologists, plant biologists, agronomists, breeders, crop physiologists, soil scientists, meteorologists, animal scientists, fishery scientists, bioinformatists, nanotechnologists, economists, sociologists, and many others are required to work together for quicker results in the emerging field of research. This can only be achieved through improving the tolerance of plants and animals to environmental stresses coupled with adoption of management practices that minimize the magnitude of stress.

Role

The abiotic stresses are manifesting into major challenges for sustaining agricultural productivity across all sectors (crop, livestock, fisheries), in the form of drought, soil salinity, sodicity, acidity, waterlogging, declining water quality, heat stress, cold wave, floods, sea water inundation, etc. The existing institutes under the Council system are not able to address the problem comprehensively in relation to the multiple stresses across the board. The NIAM will exclusively undertake basic and strategic research on mining, isolating, characterizing, and deploying novel genes for abiotic stress tolerance. It will also generate intermediate products for tolerance to multiple stresses such as gene constructs and stress induced promoters, which will be made use of by crop, livestock, fisheries, etc., based institutes to develop end products. It will seek to evolve a novel technology for edaphic, climate change related stresses and focus on HRD and capacity building on abiotic stress management. The institute will strongly complement the ongoing R&D under National Agricultural Research System (NARS) without proliferating into other new institutes.

Goal

It develops an insight into background, hypotheses to mitigate, strategies to incorporate with a foresight to practice climatically adaptable farming systems for building sustainable and profitable livelihood in stressed environments and constitutionally acceptable policy issues.

Objective

To develop agricultural commodities neutral or adoptable to mounting abiotic stresses under climate change using bio-nano-technologies and other scientific frontier tools without reducing on productivity.

Strategy

It will exclusively undertake the strategic and basic research into abiotic stresses faced in the country, strategic human resource development for long term tackling, a centralized shared database, and amelioration tactics using frontier technologies with the participation of wide network of Indian and International Institutes and exchange programmes. The institute will focus on basic and strategic research on abiotic stresses which adversely affect agricultural production (including livestock and fisheries) and the results generated would be used by other research institutes and universities besides generating some technological options that can directly be used by the farmers. With a five years of successful working, 25-30% reduction in yield losses due to abiotic stresses can be expected in the country.

Status

The Shri Moily Oversight Committee on OBC Reservations recommended the establishment of a dedicated research institute of Deemed-to-be-University Status on Abiotic Stress Management. In XI plan, the proposal by Ministry of Agriculture was approved by the Union Cabinet on establishment of "National Institute of Abiotic Stress Management" with a legal status of Deemed-to-be-University under

the Indian Council of Agricultural Research at Malegaon, Baramati, Pune district, Maharashtra.

Mandate of the Institute

The mandate of the institute is to enhance the capacity for abiotic stress management through basic, strategic, and policy support research.

- To undertake basic and strategic research on management of abiotic stresses of crop plants, animals, fishes and micro-organisms through genetic, biotechnological and nano technological tools and agronomic methods for enhanced sustainable productivity, food/feed quality and farm profitability adopting integrated interdisciplinary approaches
- To develop a Global Center of Excellence by establishing linkages and networking with national and international Institutes/agencies and
- To act as repository of information on abiotic stress and management

Addressing the Major Concerns

The operational strategy was to focus on basic research on various abiotic stresses faced in the country, strategic human resource development for long term tackling of stressed resources, shared database, and amelioration approaches using frontier technologies with the participation of wide network of Indian and International institutes involving visiting fellowships and exchange programmes. The institute shall have a comprehensive mandate of characterization of the extent of occurrence of various abiotic stresses in the country impacting the sectors of agriculture on a continuous basis and carry out basic and strategic research that will lead to development technologies for mitigation and adaptation of crops, livestock, horticulture, fisheries and micro-organisms to such stresses. Such technologies and products will be tested through the NARS and provided to all stakeholders. The specifics and strategies follow.

A. To assess and quantify the effects of major abiotic stresses on agriculture, develop a repository of information and serve as a center of knowledge sharing

- Assess extent, area and effects of abiotic stresses like drought, waterlogging, thermal and cold waves, salinity, alkalinity, acidity, nutrient toxicities/deficiencies, pollutants/contaminants including geogenics like F, Se, As etc.
- Quantify direct and indirect effects of abiotic stresses on productivity of crops (wheat, rice, maize, groundnut, pulses, vegetables, mango, citrus and apple), livestock & poultry, fisheries & aquaculture and biota
- Develop environmental characterization criteria to diagnose key climate/ soil constraints in target environments

B. To develop screening techniques and evolve stress tolerant genotypes/ breeding stock/ strains of crops, horticulture, animals, fishes, and microorganisms through mining, and deploying novel genes for tolerance to abiotic stresses

- Identify morpho-physiological, biochemical and molecular basis for adaptations to abiotic stress environments

- Develop screening protocols for evaluating resistance and mechanisms of resistance to abiotic stresses
- Evolve new genotypes including transgenics resistant to abiotic stresses through public-private entrepreneurships
- Analyze impact of climate change on vulnerability of new genotypes including transgenics resistant to abiotic stresses

C. To develop technologies for mitigation of drought, other edaphic and atmospheric stresses through frontier science tools such as nanotechnology, geoinformatics etc.

- Developing suitable soil-water-crop management technologies/strategies to mitigate abiotic stresses
- Value addition to farm produce for nutrition security, livelihood and income generation
- To develop human resource through advanced training and capacity building on the use of modern tools and techniques in abiotic stress research and management
- To analyze impact of climate change on vulnerability and develop adaptations/ mitigation measures

D. To conduct policy support research on abiotic stress management in collaboration with institutes/ organizations/ state agricultural universities

- To analyze impact of climate change on vulnerability agriculture and allied sectors and develop adaptations / mitigation measures

Organization

The NIAM should concentrate in cutting-edge research in frontier areas so that real benefit through the associated institutional set up could be fully harnessed both within country and abroad.The Institute conducts research programme through four schools namely Drought Stress Management, Atmospheric Stress Management, Edaphic Stress Management and Policy support Research. The staff position is given in table-1.

Table 1: Approved Staff Position in XI Plan EFC

Sr. No.	Category	No. of posts	Total
1	Director	01	01
2	Head of Schools		04
	Drought Stress Management	01	
	Atmospheric Stress Management	01	
	Edaphic Stress Management	01	
	Policy Support Research	01	
3	Scientific Staff		28
	Principal Scientists/ Professor	04	
	Senior Scientist/ Associate Professor	08	
	Scientists/ Assistant Professors	16	
4	Technical Staff		36
	Technical Officer (T-6)	16	
	Technical Assistant (T-3)	10	
	Technical Staff (T-1)	10	
5	Administrative Staff		16
	Registrar	01	
	Comptroller	01	
	Senior Administrative Officer	01	
	Finance & Accounts Officer	01	
	Librarian	01	
	Personal Secretary for Director	01	
	Personal Assistants in the Schools	04	
	Assistants in Registrar and Comptroller Offices	06	
	Total:		85

Director is approved and sanctioned by Union Cabinet on Feb 2, 2009. Others were submitted for financial clearance.

The important research programs would be in a matrix mode. Organizationally the above concerns are addressed by the Institute through four schools with multidisciplinary scientific activity.

1. School of Drought Stress Management

The school will primarily focus on plants, animals and fisheries research. The major research under drought stress management will include physiological manifestations, perception & transduction of stress signals & regulation of stress responsive gene expression and efficient screening techniques for abiotic stress tolerance and mining of genes involved in stress tolerance from indigenous sources for improvement of major food and horticultural crops. The enhancement of abiotic stress tolerance in major food crops with a focus on wheat, rice, maize, groundnut, pulses, vegetables, mango, citrus, and apple will be done through genomics, proteomics, and metabolomics. Plant microbe interactions in the rhizosphere will also be utilized for enhancing drought tolerance in different crops. Data base/ repository of information on abiotic stress management will be developed by Multidisciplinary Teams cutting across schools.

Major Thrusts	Team
• Impact of water stress on plants • Crop/livestock thermal responses (cold and heat) • Influence of radiation and dust load on crops and livestock • Influence of organics and heavy metals on crops, livestock and fishes • Plant and livestock adaptations to environmental stresses • Influence of pollutants/contaminants including geogenics on plants, livestock and fisheries • Improvement of stress tolerance through biotechnological tools • Farming systems for specific stresses under different agroecological regions • Stress mitigation/managing through farming systems approach • Evaluation of GM plants developed for agroecological regions • Develop ALUs including agroforestry and rangelands/silvopasture for drought prone areas • Value addition to farm produce	Agrometeorologist, Soil Scientist, Soil Microbiologist, Plant Physiologist, Plant Biochemist, Organic Chemist, Animal Physiologist, Molecular Biologist, Biotechnologist, Fish Scientist, Plant Ecologist

2. School of Atmospheric Stress Management

The impact of extreme weather events like elevated CO_2 , heat wave, cold wave, freezing injuries, severe sand storms etc on major food and horticultural crops, livestock and fisheries and developing decision support system (DSS) for mitigating the effect of extreme weather events will be dealt by the school. The assessment of photosynthesis, growth and productivity of important crops under Atmospheric Brown Clouds (ABC) of black carbon and other aerosols, isolation of relevant genes for conferring tolerance to ABC will be studied critically. Studies will also be done on elucidating metabolic and molecular basis of adaptation of crops, animals, fish, and microbes to elevated CO_2 and temperature using genomics approach as well as systems biology strategies by Multidisciplinary Teams cutting across schools.

Major Thrusts	Team
• Monitoring climate • CO_2/O_3 emissions under different landuse systems and their influence on plants, animals and human beings • Climate change and livestock/human health • Impact on natural resources and surface processes • Influence of radiation and dust load on crops and livestock • Farming systems for specific stresses under different agroecological regions • Stress mitigation/managing through farming systems approach • Evaluation of GM plants developed for agroecological regions • Develop ALUs including agroforestry and rangelands/silvopasture for drought prone areas. • Value addition to farm produce • Modeling	Animal Physiologist, Animal Ecologist, Agrometeorologist, Plant Ecologist, Plant Physiologist, Biochemist, Molecular Biologist, Biotechnologist, Agronomist, Geographers, Pedologist, Hydrologist, Agronomist

3. School of Edaphic Stress Management

In this school, studies of genetic and molecular basis of tolerance and ion homeostasis under salinity, nutrient deficiencies and heavy metal excesses, waterlogging, and poor quality water in major food and horticultural crops, animals, microorganisms, and fishes, will be carried out. The application of nano-technology and nano materials for evolving novel products and methods for bioremediation and biotrapping and soil metagenome studies to mine and isolate novel genes that confer tolerance to above stress will be explored. Studies on assessment of soil as a sink for green house gases and methods in mitigation of salinity, waterlogging and heavy metal excesses will be worked out under this programme. The impact of sub-mergence and anoxia on crop growth and productivity through use of systems biology approach will be studied under this programme by Multidisciplinary Teams cutting across schools.

Major Thrusts	Team
• Salt dynamics and crop responses • Nutrient stress in plants, livestock and fisheries • Soil microbes and adaptations • Soil pedon changes • Influence of pollutants on soil and soil microbes • Bioremediation of salt affected/ contaminated soils • Soil health and its improvement • Influence of organics and heavy metals on crops, livestock and fishes • Farming systems for specific stresses under different agroecological regions • Stress mitigation/managing through farming systems approach • Evaluation of GM plants developed for agroecological regions • Develop ALUs including agroforestry and rangelands/silvopasture for drought prone areas • Value addition to farm produce	Soil Physicist, Soil Chemist, Soil Microbiologist, Hydrologist, Plant Physiologist, Plant Biochemist, Animal Physiologist, Animal Ecologist, Animal Biochemist

4. School of Policy Support Research

In this school, the remediation strategies for moderation of abiotic stresses will be evolved. Novel management options will be designed for stress mitigation and carbon trading under clean development mechanism. Focus on policy research for promoting the adoption of mitigation/ adaptation strategies for abiotic stresses will be dealt with in this school by Multidisciplinary Teams cutting across schools.

Major Thrusts	Team
• Monitoring climate • CO_2/O_3 emissions under different land use systems and their influence on plants, animals and human beings • Climate change and livestock/human health • Impact on natural resources and surface processes • Farming systems for specific stresses under different agro-ecological regions • Stress mitigation/managing through farming systems approach • Develop ALUs including agro-forestry and rangelands/silvo-pasture for drought prone areas • Modeling	Economist, Sociologist, Animal Physiologist, Animal Ecologist, Agromet, Plant Physiologist, Plant Ecologist, Biochemist, Molecular Biologist, Biotechnologist, Agronomist, Geographers, Pedologist, Hydrologist, Agronomist

Some Specialized Lab and Field Facilities Envisaged

Laboratories

Agromet, Agronomy & Soils, Animal Physiology & Nutrition, Avian Physiology & Nutrition, Fisheries Physiology & Nutrition, Genomic Research with (cold) Banks, Microbial Diversity & Physiology, Nano-Bio-Technology, Plant Physiology & Biochemistry, ARIS and others.

Sophisticated Instrument(s) Facilities

Atomic Absorption Spectrophotometer, Digestion Room with CHNSO analyzers, Environmental Shakers, ICPMS with advanced microwave digestion system, Liquid Scintillation Counter, Macro array hybridization system with Image analysis, MALDI-TOF Mass Spectrometer, NMR, Ratio Mass Spectrometer, Refrigerated Centrifuges including vertical low temperature freezers, Electron Microscope, X- Ray diffractometer and others.

Data Centers

Bioinformatics center, Database center, GIS Lab and others Specialized On-farm Research Laboratories: Animal respiratory Chambers, FACE facility for climate change studies, Green/Glass Houses, Lysimeter, Open top Chambers, Phenotorium with Plant imaging System, Phytotron with O_3 equipment, Rainfall Simulator, Rhizotron, Temperature gradient tunnels and others.

General On-farm Research Facilities

Agricultural Farm, Bird Enclosures, Farm Office-cum store, Fish Ponds, Horticultural Farm, Livestock Sheds, Met Observatory, Workshop and others.

Activities

The Hon' Chief Minister of Maharashtra Shri. Vilas Rao Deshmukh on 5 May, 2008 offered to Shri Sharadchandraji Pawar, Hon' Minister of Agriculture & Consumer Affairs, Food & public Distribution, GOI to host the National Institute of Abiotic Stress Management, at Baramati, Pune District, Maharashtra. An ICAR committee visited the allocated site on 16 June, 2008. The Ministry of Agriculture notified the Press on 29 January, 2009, about the formation of this new Institute that will have a Deemed University status with a budget of Rs. 73.5 crores on the approval of the Union Cabinet in XI plan. The foundation stone for this Institute was laid on 21 February, 2009 by the Hon' Minister of Agriculture & Consumer Affairs, Food & Public Distribution, GOI, Shri Sharadchandraji Pawar. The appointment of the Director of the Institute, sanctioned by the Union Cabinet, was done on 13 August, 2009. Several details on milestones can be seen in the chronology of events in this report later.

This year is practically the starting point of foundation for the scientific and other activities of the Institute in future to come. During this year, the Institute was active in liaison of basic works for infrastructure development. This financial year has started with a good omen of the issue of order of the District Collector, Pune, to clear the encroachment of the neighboring farmers on the Government land of Gat 35 within 8 days in Malegaon Khurd, Baramati. The Sub-Divisional Officer, Baramati was vested with the responsibility. This is the same land shown to the Committee of the Council Chaired by the Deputy Director General of Natural Resource Management, for establishment of the new Institute in XI Plan at Malegaon Khurd.

Land

In 2007, the Google map of Gat-35 shows a very good plantation of *shisham* and others on contour with crescent mounds done along with continuous contour trenches. Presently very few plants only exist. The survival rate is very poor. Even the growth of grasses is highly marginal. The land use is Goyrans. This land is usually used for small ruminant grazing during monsoon season by the *Dhangars* (nomads). Other visitors are herd of a dozen wild deer. Specifically absent are the visits of large ruminants. Despite the conservation efforts, large amount of runoff at present seems to be going out of the site. However, same can be harvested at about five points. The neighboring farmers feel that due to high wind speed the rain moves away from this part towards south direction. This can be one of the reasons for a poor stand of plantation done. Officially 13.5 ha, being cultivated, were noted to be encroached out of 76.5 ha of this Gat. Around this high mound surrounding are sugarcane, pomegranate, mango, coconut, vegetables, flowers, etc.; a little pearl millet is also visible. This encroached land on west side is also included in the area originally earmarked by the Collector to the Council. This encroachment on the fertile margin and being used for agriculture/ horticulture/

Field Visit

Discussion on Building

avian unfortunately was not available to this Institute.

The site is having an elevation difference of 17 m on the north from bottom most portions at the south boundary. The land is predominantly suitable from buildings due to hard rock for foundation. The Soil Survey Report prepared by the National Bureau of Soil Survey & Land Using Planning, Nagpur, is available in this Report. A research farm development on the campus needs a huge investment for leveling, sub-soiling, profile modification, and top layering with tank silt/ black soil under expert guidance. Thus, the building up of soil for horticulture, crops and others and their maintenance will be a real and continued challenge before the scientists.

Added to the tribulations are, this land is being used for running the pipe lines at shallow depth, almost on the surface, from the nearby Nira canal to their fields by lift irrigation by farmers without any formal information or sanctions. There is an electrical Sub-station of 'Mahavitaran' centrally placed at the crossing of diagonals on the site. This land also is criss-crossed by high tension electrical feeder power lines and distributions lines. Added to this are telephone lines. There is a central public (Sarvajanik) road from east to west. To make it conducive for institute development, it requires the shifting of Sub-station, moving out the electrical and telephone lines, closing the central road, the water pipes, other private property like unused tanks, private pipes, used truck parts, private thatch hutments, etc. Thus, this requires disturbing the people who are enjoying the fruits of encroachments. Notice for clearing encroachments by revenue department, legal paper advertisements, letters, personal requests, etc., did not get any response. The Revenue Department sought the Council's support for funding the removal of encroachments which was politely denied. A few efforts made with heavy machinery were protested and efforts to remove were of no impact. Over time due to binding alterations the perimeter of the land to be handed over changed from 2.6 km to 3.3 km with elongation to pear shape limiting to un-encroached remnants of an unwanted land.

A clue from the chronology of events reveal that even though there is plenty of the area available for research farm at this Gat, a separate additional good farm land was specifically sought from the Secretary, Government of Maharashtra by the Council. Similarly, the committee appointed by the Council in view of the remoteness to various facilities and difficulties for drinking water also requested for a 5 ha area for residential quarters and guest houses and training hostels. Appropriately perceiving the associated problems of this specialized research organization, the Government of Maharashtra readily

allocated funds for its purchase from farmers and residential land from Maharashtra Industry Development Corporation (MIDC) through the Mahatma Phule Krishi Vishwavidyalay (MPKV), Rahuri, nodal agency for agriculture research in this Madhya Maharashtra region. On pursuance, funds were transferred from MPKV to Commissioner of Agriculture to Collector. The Sub-Divisional Officer, Baramati made payment to State Transport for MIDC land. A tripartite deed is to be made between the Council, State transport and MIDC. Shri Ajitji Anantrao Pawar, Hon'ble Minister for Water Resources (Excluding Krishna Valley & Irrigation Corporation), Energy, Government of Maharashtra held a meeting at Mantralaya, Mumbai, with the concerned parties for hastening the process. The response from the State Transport to handover is lukewarm. The offer also changed in shape from a full front main roadside area to a narrow corridor squeezed between high voltage electricity station and State Transport bus repair workshop with thermal and sonic pollutions. Further, this is about 16 km away eastwards from this Institute with the commuting a continuous problem. In fact to facilitate traffic three flyovers are planned at this taluka headquarters.

On 31 December 2009, the boundary of 56.49 ha inclusive of the Sarvajanik Road and area under sub-station was marked and handed over to the Director by the revenue department as a single piece; leaving all the encroachments and a 30' road outside the boundary. At the south end, an area of one ha was also earmarked for shifting of electrical sub- station for public use from the site handed over to the Institute. The original offer of 30 years lease was enhanced to 99 years and mutation in the 7/12 revenue extract was made. A lease @ Rs 1/- per annum for 99 years towards the above land was paid.

Shri Rajiv Mehrishi, IAS, Additional Secretary (DARE) and Secretary (ICAR), New Delhi along with Director (Works) visited the institute on 26-27 January 2010, and held discussions with revenue department on land issues, CPWD on infrastructure development, Mahavitaran on electricity related concerns, Irrigation department and Maharashtra Jeevan Pradhikaran (MJP) on water problems, Maharashtra Industrial Development Corporation (MIDC) on land for residential quarters, and other related issues several other officials/parties concerned. The prioritized items were bore well, electric connection, boundary wall, and workshop shed for housing the temporary office.

There are two sources of water namely from the irrigation canal directly with the permission of Department of Irrigation and other drinking water facility from balancing reservoir of MJP. The former one is to be developed and will be under full control of the institute but will have a need for large reservoir on site for storage in view of the periodical water release in the canal. Other one was also raw water supply but limited in extent of supply in view of water being meant primarily for drinking purpose. The storage requirement will be very heavy during summer due to long period of gap for water release. The later source will require the Panchayat's approval. The Council preferred to obtain water from a single source and avoiding the construction of reservoirs. Thus the MJP was approached for the plan to bring water from 6 km distance including 1.5 km run in the site and lifting over 20 m height. But the permission is still awaited despite efforts put in for early sanction. Irrigation water will be an added expense to be brought from 1.5 km from nearest point of the canal. Similar is drinking water. The ground water could not be reached even at 30 m in a bore. This needs to be included in revision of EFC under works. Estimated water requirements of the institute are given in table-2.

Table 2 : Tentative Potential Daily Water Requirements of the Institute

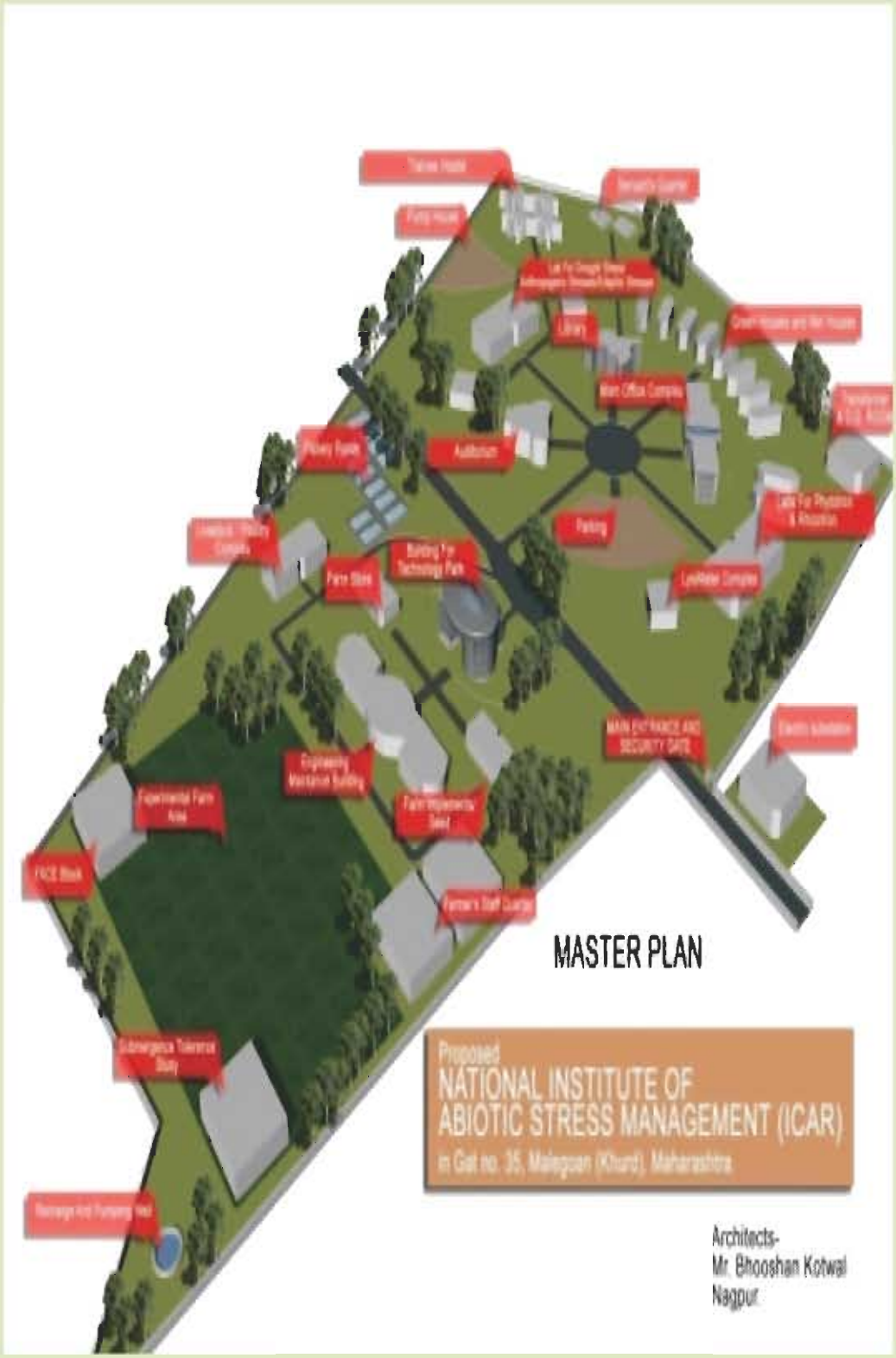
Facility	Water ('000 litres)
Main office complex (85 regular + 114 contractual staff including labour)[1]	36.0
Quarters (20 quarters x 5 heads)[1]	20.0
Guest House (10 rooms x 2 heads)[1]	3.6
Trainee Hostel (30 heads)[1]	5.4
Auditorium[2]	1.0
Library[2]	1.0
Laborteries - Drought stress[2]	2.0
Labortory- Atmospheric stress[2]	2.0
Labortory- Edaphic stress[2]	2.0
Phytotron & rhizotron Complex[2]	2.0
Lysimeter Complex[2]	2.0
Green Houses[2]	5.0
Engineering Workshop[2]	5.0
Farm office cum stores[2]	1.0
Technology park[2]	1.0
Fishery laboratory[2]	5.0
Fish ponds[2]	5.0
Submergence tolerance study[2]	5.0
Canteen[2]	1.0
Electrical substation[2]	1.0
Cooling Tower[2]	5.0
Animal Shed (30 animals)[2]	3.0
Poultry (100 birds)[2]	0.1
Total Treated Water	78.1
Farm, Horticulture etc. (50 ha)[4]	5000.0
Total irrigation water	5000.0
Total Water requirements	5078.1

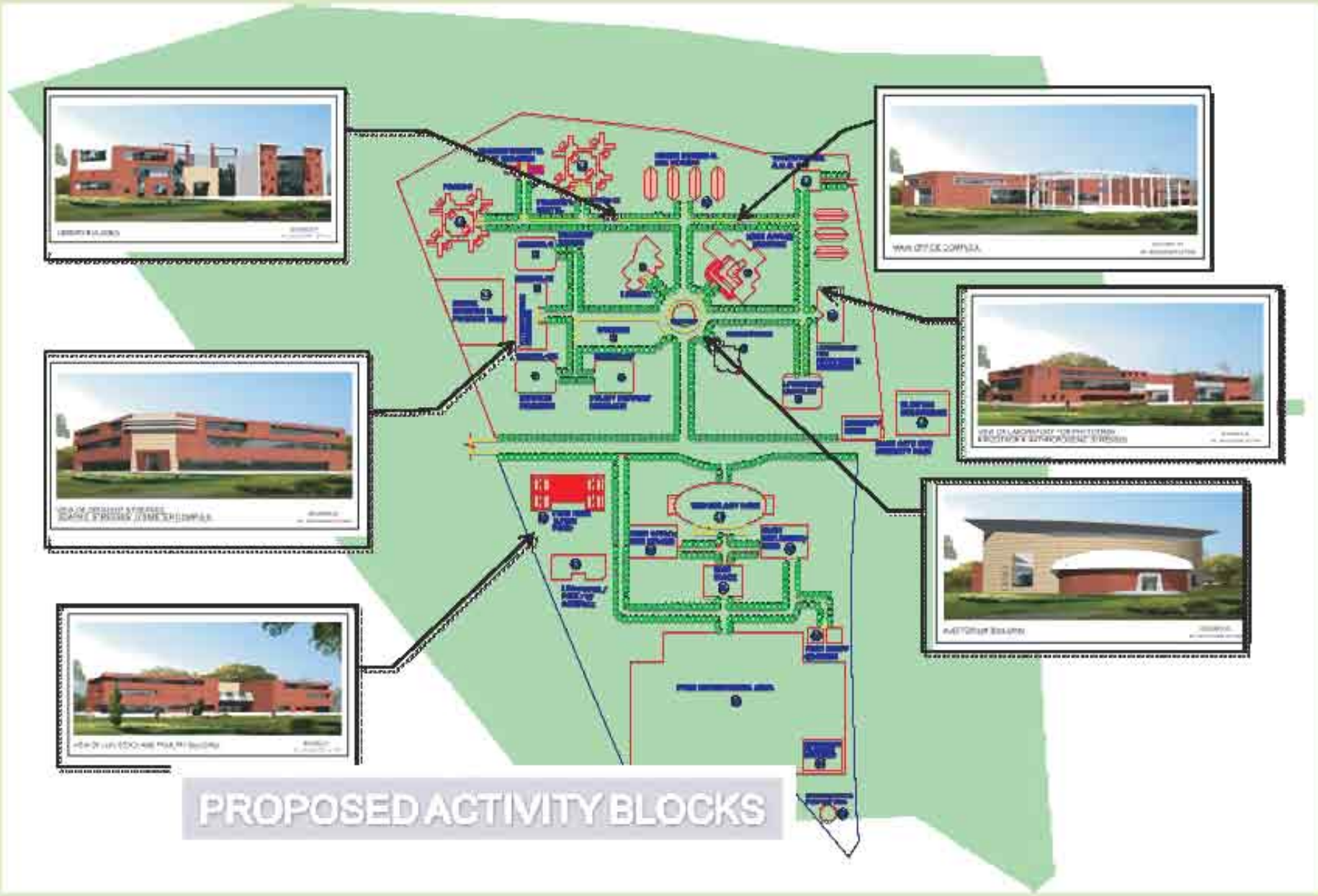
[1]MJP - Maharashtra Jevan Pradhikaran (@180 l/head); [2]VP- Vidya Pratishthan, Baramati; [3]KVK, Baramati (@100 l/animal[3]&1 l/bird); [4]Water requirements of crops (@ 10mm)

Sequent to this the Mahavitaran was approached for shifting the public sub-station and establishing another exclusive sub-station (estimated requirement is 200 kw) for the Institute. Even though, they indicated a requirement of overseeing charges for shifting and cost of establishment of new sub-station, this office is yet to get the information. The overall requirement on fully functional may be about 7-9 MA current requirement.

A few farms were shown also by the revenue department on farmers' fields for consideration of the Council to both ADG (Agronomy) and Secretary on their separate visits. These were found to be far from matching the needs of the Institute.

As the site at present is farther from Malegaon BSNL office, they recommend that the Council should go for advanced wireless data transfer technologies, which soon will be available. However, there are some lines nearby were noticed which may be shared for this institute also.


MASTER PLAN
Proposed
NATIONAL INSTITUTE OF
ABIOTIC STRESS MANAGEMENT (ICAR)
in Gat no. 36, Malegaon (Khurd), Maharashtra
Architects-
Mr. Bhooshan Kotwal
Nagpur


PROPOSED ACTIVITY BLOCKS

As per the direction of the Council, the sanctioned works in the EFC were given to the CPWD, Pune. Initiation was made for appointing an Architect through the CPWD. In view of their submission that it should be carried out by the Council with their vetting in view of funds deposited with CPWD, a tender was under preparation. The boundary wall construction was started almost at the end of March 2010. The built up wall will be within the limits of boundary of allotted land. The site of workshop also was marked at a point with an overall view of the farm area, adjacent to the existing power house to overcome cabling difficulties, and be centrally located for reach. The foundation was laid and work under progress. For reviving the few surviving plants on farm side, gardening on contract was being given.

The camp office is located on the top floor of Krishi Vigyan Kendra, Agricultural Development Trust, Sharada Nagar, Malegaon at the offer of the Program Coordinator to the Council on hire basis. This office is equipped with furniture, computers, tables, partition, converters, committee table, coolers, cupboards, telephones, fax, etc. The limitation of nine hours of power shut down at this village and very limited refreshing facilities were a few of the inconveniences. A web site was started with address of http://www.niam.res.in. The acronym of NIAM was retained in view of it use in EFC document submitted by the Secretary, Indian Council of Agricultural Research, to Ministry of Agriculture. Similar is the retention of the word 'stress' in Hindi translation. Display boards of the Institute in three languages showing the direction and distance was displayed at the crossroads and on the site. Boards were also installed on cautioning against trespassing.

First Republic Day of the Institute

Boundary Wall Initiation

Land Breaking

The various offices and possible strength is also noted in the table -3. In the checklists for various scientific positions the specifications aim at higher end talent with knowledge and experience in sciences related to abiotic stress sector. Further, the infrastructure requirements for architectural drawings may be seen from the table-4. Expected full strength of staff, scientists, students, contractual staff are given in table-5.

The staff was being built from redeployment of the positions of other Institute and positions given under ADRP. An advertisement was given for ADRP positions and recruitment will be completed soon. Merit list will be made through the adding up of marks of 20% for qualification, relevant experience etc., 50% for on-line examination and 30% for interview, independently; the marks will be combined only after the interview to provide full transparency of the recruitment process. Efforts were also made for outsourcing the services on contract, procurement of three vehicles and submitting checklists of approved posts. The details are given elsewhere. Initiatives were also taken on IMC, RAC and Official language implementation.

Table 3: Proposed Staff distribution in Schools/ Sections/ Cells

Sch/Adm	Discipline/Unit	Dir	Head	PS	SS	S	T-6	T-3	T-1	P/S	PA	Lib	Com	Reg	SAO	FAO	Asst	Total
Director	Director Cell	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Admin	Registrar Office	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	3	5
Admin	Comptroller Office	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	3	5
Admin	Library	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Admin	Estate Cell	-	-	-	-	-	-	-	1(G), 1(P)	-	-	-	-	-	-	-	-	2
Admin	Vehicle Cell	-	-	-	-	-	-	-	2(D), (M)	-	-	-	-	-	-	-	-	3
ASM	Agrometeorology	-	1	1	1	1	1	1	-	-	1	-	-	-	-	-	-	7
ASM	Animal Biotechnology	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
ASM	Animal Ecology	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
ASM	Animal Physiology	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
ASM	Fish & Fishery Science	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	2
ASM	Fish Biotechnology	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	2
ASM	Livestock (VS)	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	3
ASM	Poultry	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	2
DSM	Biochemistry	-	1	-	-	1	-		-	-	-	-	-	-	-	-	-	2
DSM	Plant Biotechnology	-	-	-		1	1	1	-	-	1	-	-	-	-	-	-	4
DSM	Horticulture	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
DSM	Library	-	-	-		-	-	1(I)	-	-	-	-	-	-	-	-	-	1
DSM	Microbiology(Plant Sci)	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
DSM	Molecular Biology	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
DSM	Plant Ecology	-	-	-		1	-	-	-	-	-	-	-	-	-	-	-	1
DSM	Plant Physiology (Phyt)	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	4
DSM	RCMU	-	-	-	-	-	1(A5)	1(IT)	-	-	-	-	-	-	-	-	-	2
ESM	Agriculture Eng	-	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	3
ESM	Agronomy	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	2
ESM	Farm	-	-	-	-	-	1(Ag)	-	1(TP), 1(M)	-	-	-	-	-	-	-	-	3
ESM	Lysimeter	-	-	-	-	-	1(SS)	-	-	-	-	-	-	-	-	-	-	1
ESM	Rhizotron	-	-	-	-	-	1(H)	-	-	-	-	-	-	-	-	-	-	1
ESM	SWC Eng	-	-	-	-	-	1(Hy)	1(AEng)	-	-	-	-	-	-	-	-	-	3
ESM	Soil Chemistry	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	2
ESM	Soil Physics/ Soil & Water Conservation	-	-	-	-	1	1	1(H)	-	-	-	-	-	-	-	-	-	3
ESM	Workshop	-	-	-	-	-	1(FMP)		1(AEng)	-	-	-	-	-	-	-	-	2
PSR	Agricultural Economics	-	1		1		1	1			1						-	5
PSR	ARIS	-	-	-	-	-	1(CS)	-	-	-	-	-	-	-	-	-	-	1
PSR	ATIC	-	-	-	-	-	1(AE)	1(P)	-	-	-	-	-	-	-	-	-	2
PSR	Computer Science	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
PSR	GIS	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
PSR	Social Science	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Total	1	4	4	8	16	16	10	10	1	4	1	1	1	1	1	6	85

Admin	Administration	GIS	Geo Information Systems	PSR	Policy Stress Management
AE	Agri Extension	H	Horticulture	Reg	Registrar
AEng	Agricutural Engineering	Head	Head of Schools	S	Scientist/Asst. Professor
Ag	Agronomy	Hy	Hydrology	SAO	Senior Administrative Officer
A5	Agricultural Statistics	I	Instrumentation	Sch	School
ASM	Atmospheric Stress Management	IT	Information Technology	SS	Senior Scientists/Associate Professor
Asst	Assistants	Lib	Librarian	SS	Soil Science
Com	Comptroller	M	Mechanic	SWC	Soil & water Conservation
CS	Computer Science	P	Pump Operator	T-1	Technical Staff
D	Driver	P	Photography	T-3	Technical Assistants
FAO	Finance & Account Officer	P/S	Personal Secretary	T-6	Technical Officer
Dir	Director	PA	Personal Assistants	TP	Tractor Operator
FMP	Farm Machinery & Power	Phyt	Phytotron	VS	Veterinary Science
G	Gardener	PS	Principal Scientists/ Professor		

Table 4: Estimated Types of Space Requirements of Accommodation

Offices	200 m^2+	100-200 m^2	30-100 m^2	20-30 m^2	10-20 m^2	5-10 m^2
Director Cell		Committee Room Technical Cell	Director Chamber	Reception Room	Library PS Room Office File/Records Room Toilets	Pantry Attached Toilet Room
Registrar Office	Central Stores	AAO/ Assistants Partitions		Registrar Room [3]-1 Toilet Rooms -1	Estate Management Section Examination Record Room Reception Room -1 Office File/ Records Room -1 SAO Room -1 Thesis Record Room - 1	Attached Toilet Dispatcher Room PA Room Pantry Security Cell -1
Comptroller Office		AFAO/ Assistants' Partitions-3		Comptroller Room[4]-1 Toilet Rooms -1	FAO Room -1 Reception hall-1 Office File/ Records Room -1	Attached Toilet PS Room -1 Voucher Room -1 Pantry-1
Space for each school (Total Four)		Class Room/ Conference Hall-1 Reception-cum-display/exhibition hall-1	Committee Room -1 Library-1 Scholars 'hall -1	Heads Room[5]-1 Toilet Rooms - 2 Store Room (Non-consumables) - 2 Visiting Scientists Rooms 2	Contract Scientists Rooms 3 Office File/ Records Room -1 Scientists' Rooms[2]-7 Technical Officers' Rooms - 4	Attached Toilet PA Room -1 Pantry-1 Store Room (Consumables) - 2
Laboratories & Sophisticated Instrument(s) Facilities & Data Centers		Agromet - 1 Agronomy & Soils - 1 Animal Physiology & Nutrition - 1 Avian Physiology & Nutrition - 1 Fisheries Physiology & Nutrition - 1 Genomic Research with cold Room -1 Microbial Diversity & Physiology - 1 Nano Bio Tacnhology with cold bank - 1 Plant Physiology & Biochemistry - 1 Policy Support - 1 Bioinformatics center-1 Database center-1 GIS Lab -1	ICPMS with advanced microwave digestion system - 1 Digestion Room with CHNSO analyzers 1 Environmental Shakers -3 1AAS 1 Liquid Scintillation Counter -1 Macro array hybridization system with Image analysis -1 MALDI-TOF Mass Spectrometer 1 NMR 1 Ratio Mass Spectrometer 1 Refrigerated Centrifuges Including vertical low temperature freezers-1 Scanning Electron Microscope -1 X- Ray diffractometer -1 Others -3			
Specialized On-farm Research Laboratories		Animal respiratory Chambers 1 FACE facility for climate change studies -1 Green/Glass Houses-6 Lysimeter-1 Open top Chambers - 1				

Offices	500 m²+	100-500 m²	50-100 m²	20-50 m²	10-20 m²	5-10m²
		Phenotorium with Plant Imaging System-1 Phytotron with O_3 equipment-1 Rainfall Simulator-1 Rhizotron-1 Temperature gradient tunnels -1				
General On-farm Research Facilities	Agricultural Farm-1 Horticultural Farm-1	Bird Enclosures-4 Farm Office-cum store-1 Fish Ponds-4 Livestock Sheds-4 Met Observatory-1 Workshop-1				
Library	Central Library -1	Documentation Center-1	Virtual library facility - 1	Librarian Office -1		
Common Facilities	ATIC[3]-1 Auditorium (capacity 400)[3] - 1 Faculty Club/ Community Hall[3]-1 Vehicles/ tractors/ Implements Sheds -10 Parking Facilities - 4	ARIS including telephone network 1 Electric Supply Scheme-1 Garages[3]-1 Instrumentation Engineering Workshop -1 Waste Disposal Unit-1 Water Supply Scheme-1	Canteen[3] -1 Reception -1 Teleconferencing Hall -1	Facilities to Labour[3] - 1 Generator Room-1 Industry-Interface Hall[3] 1		
Cells cutting across Offices				Cashier/ Bursar Room 1 Hindi Cell-1 IISC Room 1 Old Office File/ Records Room -1 RTI Cell-1 SC/ ST/ Minority Cell 1 Vigilance Cell-1 Women Cell-1		
Staff Quarters		Type VII (225 sqm) -01 Type VI (160 sqm)-08 Type V (106 sqm)-10 TypeIV(91qm)-35	Type III (65 sqm)-11 Type II (50sqm) -20			
Hostels			Single Room Suites - 54 Single Room Suites with kitchen-32 Double Room Suites with kitchen-48 (including 12 nos for International students)	Warden Office -1 Storage Room -1		
Guest Houses			VVIP suites-04 VIP suites-04 Deluxe suites-12			
Games & Sports Medical and Auxiliary	Amphitheater, Indoor Stadium -1, Gymnasium, Pavilion, Swimming Pool, Reading Room, Parking area	Hospital with beds	Co-operative Welfare Societies -1 Professional Society -1	Bank Extension Counter/ATM -1 Post Office-1		

Table 5: Expected Staff in Office on a Given Fully Functional Day (Includes Regular, Contractual, Services, Students, etc.)

Director's Cell	**Schools**	*Research Fellows of externally funded projects and expected 25 visitors are not included*
Director-1	Head-4	***Outsourced Services (man days per annum)***
PS to Director-1	PA to Head-4	*Security supervisors 2160 (3 Compuses)*
Contractual staff-3	Principal Scientists-4	*Security Guards 28000 (3 Compuses)*
	Senior Scientists-8	*Farm, lawns etc. 200 (2 Compuses)*
Registrar's Office	Scientists-16	*Hort, Fisheries 400*
Registrar-1	Technical Officers-16	*Livestock, Birds 7200*
SAO-1	Technical staff-20	*Canteen - 2225*
Assistants-3	Contractual staff-100*	*Total 39785 (ie 109 persons per day)*
Contractual staff-15	Post-Graduate Students-48	
	Doctoral Fellows-48	
Comptroller's Office	Post Doctoral Fellows-4	
Comptroller-1		
FAO-1	**Estimated total staff**	
Assistants-2	Sanctioned staff-85	
Contractual staff-15	Students-100	
	Contractual staff-136	
Library	Outsource-109	
Librarian-1	Trainees-20	
Assistant-1		
Contractual staff-3	**Grand Total-450**	
	*Includes visiting/ contractual Scientists also	

The logo of this institute is prepared and under improvement. Elsewhere in this annual report the description of the logo is given. A video on the institute initiation and profile is in progress.

Efforts were initiated to prepare a map of abiotic stresses in the country with the present available information. The National Remote Sensing Center, Hyderabad, National Atlas and Thematic Organization, Kolkata, National Bureau of Soil Survey and Land Use Planning, Nagpur and National Environmental Engineering Institute, Nagpur showed keen interest to join in this venture. The NRM division observed that the already available information on waterlogged areas, rainfed areas, degraded lands, nutrient availability, deficiency etc. in map form may be utilized. Further added calling for more precise information to be of any practical use than a 1:250000 scale map. This calls for a huge effort, which this institute volunteers, given an opportunity.

A farm plan was prepared (1 ha rectangular plots of 125 x 80 m dimension units across slope) and presented to the Deputy Director General (NRM). Efforts will be made to develop a Gene Bank of the crops of interest. It is expected to house a few types of typical on-farm made-up soils for research.

Available research information on the abiotic stresses on internet was being put in a data base for intranet use. Thus the institute is developing a digital library using UNESCO's WINISIS software by building a full text bibliographic database by using free online open source documents from Internet. A request made to IARI for provision of password given by CeRA to other National Institutes under NAIP did not meet with much positive response. The attention is mostly focused from early in the new millennium.

The Specialized On-farm Research Laboratories like Free Air Circulation Exchange facility for climate change studies, Lysimeter complex, Phenotorium, Phytotron with O_3 equipment, Rainfall Simulator, Rhizotron, Temperature gradient tunnels and others need an exposure of the user scientist to facilities abroad to build state-of art.

Fish Pond

Phytotron

Rhizotron

Lysimeter

The purchase of equipment is also deferred awaiting initiatives on recruitment. The payments to the architect who prepared conceptual buildings and displayed the at foundation day on 21.2.2009 and cost of holding the function payments costing more than Rs. 15 lakhs was paid. Despite all the limitations the budget utilization is one hundred per cent. The details are given elsewhere in this report.

The focus and strategy of the institute was circulated by email to about a thousand persons and put on FAO website **solutionexchange-un.net.in** and institute website **niam.res.in** etc., with little outcome. It's time for the institution to invest not only bricks but on brains also, if not there will be a mismatch between expectation and output by getting at least a few people who are going to work here, to avoid popular 'no work at all' syndrome. Even though the Union Cabinet approved this National Institute a deemed University status, it must earn this bench mark status in coming times. This needs considerable investment on human resource development. Hence, for 'Vision' development, a scientific services contract will be utilized for

- Identification of established National/ International Colleges/ Universities/ Research Centers/ industries, etc. dealing with Abiotic Stress Management Research in Plants/ Livestock/ Fisheries, etc., including in the context of Climate Change
- Enabling Collaborative Research with identified National/ International, public/private partners on prioritized programs that compliment ongoing work without duplication
- Design and development of programs and publicity products for NIAM including National/International Seminars/ Workshops
- Design Curriculum and program through Brain Storming sessions with Scientist/ Experts for finalization of Post-graduation, Doctoral programs, and capacity building in Abiotic Stress Management Research
- Build organization chart for the Deemed University along with suitable suggestions on experts/ consultants to fill the corresponding roles, and
- Prepare a short term road map for Abiotic Stress Management Research, Education and Technology transfer at NIAM

Following meetings are being planned -

- One Day Curtain Raiser Meet on Research Needs Arising due to Abiotic Stresses in Agriculture Management in India under Global Climate Change Scenario
- Farmers' Meet/Farmers' Day to interact with farmers.
- Three day National Workshop on Add-on Research Initiatives to Counter the Effect of Mounting Multiple Abiotic Stresses with Climate Change on Various Sectors of Agriculture

Now pending the infrastructure getting ready, the NIAM proposes to initiate Research at the earliest on Abiotic Stress Management with leading National/International participation resulting in -

- Actions for early start of the different programs and activities,
- Post-graduation, Doctoral Programs, higher end capacity building and others, and
- Interface with Industry for Collaborative Research.

This subject has planted a keen interest in a few icons of industry, international organizations etc., already. It needs nurturing in a futuristic direction on a right path.

Important Milestones

Copies of the important documents namely- Letter of Hon' Chief Minister of Maharastra, Shri Vilasrao Deshmukh, to Hon' Minister of Agriculture & Consumer Affairs, Food & Public Distribution, GOI, Shri Sharad Pawar on offer of 150 acre of Government land free of cost for establishing a new institute at Malegaon, Baramati, Maharashtra in XI Plan (Government of Maharashtra CMS/FS/10(8)/107), Collector, Pune, Order on 56 ha in G.No.35 made available for the Institute with water from Nira Left Bank Canal (1 km away), electricity substation with 33 KV, 56.49 ha land marked in Gat 35 after allowing encroachments and leaving thirty feet road all around with a perimeter of about 3.3 km in the central portion; mutated to the institute vide Revenue Extract 7/12, payment of lease, tabapauti, Minutes of the meeting of the cabinet, South Block, New Delhi, on approval of the New Institute "National Institute of Abiotic Stress Management, Malegaon, Baramati, Maharashtra" costing Rs 73.5 crores (GoI/Cabinet Secretariat No.6/ CM/2009(i) Case No.24/6/2009), Invitation for Foundation stone laid by Shri Sharad Pawar, Hon' Minister of Agriculture, Consumer Affairs, Food and Public Distribution, Government of India, in the presence of Shri Bala Saheb Thorat, Agriculture Minister, Shri Ajit Pawar, Minister of Water Resources (excluding Krishana Valley Irrigation Corporation), Command Area Development and Water Supply and Sanitation, Shri Dilip Valse Patil, Finance and Planning Minister, Shri Harshawardan Patil, Minister of Cooperation, Employment Guarantee Scheme, Cultural Affairs and Parliamentary Affairs of Government of Maharashtra and Smt Supriya Sule, Member of Parliament (Rajya Sabha), Dr Mangala Rai, Secretary (DARE) and Director General (ICAR) and Dr AK Singh, DDG (NRM), ICAR, etc., Proceedings of the ICAR Committee, Press notification are placed on record in this chapter. The details on date and events follows:

Foundation Stone laid on 21st February 2009

Date	Event
2 May 2008	Collector, Pune, Order on 56 ha in G.No.35 made available for the Institute with water from Nira Left Bank Canal (1km away), electricity substation with 33 KV (Signed document)
5 May 2008	Letter of Hon' Chief Minister of Maharastra, Shri Vilas Rao Deshmukh, to Hon' Minister of Agriculture & Consumer Affairs, Food & public Distribution, GOI, Shri Sharad Pawar on offer of 150 acre of Government land free of cost for establishing a new Institute at Malegaon, Baramati, Maharashtra in XI Plan (Government of Maharashtra CMS/FS/10(8)/107)
8 May 2008	Committee formulation for establishment of a new National Research Institute on abiotic stress during XI Plan (Drs AK Singh, DDG (NRM), Chairman; Members - PK Agarwal, National Professor, IARI, RB Deshmukh, VC, MPKV, Rahuri, KE Lawande, Director, NRC on O&G, Pune, YS Ramakrishna, Director, CRIDA, Hyderabad) (ICAR/F.No.1-26/2008/IA-II)
9 July 2008	BDO, Baramati, Pune to Collector , Pune on the Gut 35 (Letter No. land /1089/2008)
16 June 2008	Proceedings of the Committee for establishment of new National Research Institute on Abiotic Stress during XI Plan at Malegaon, Baramati, Maharashtra (PA/DDG/NRM/2008-112)
16 July 2008	Request for the 150 ac land in Malegaon, 10 ha for precise scientific experiments within the vicinity of Institute and 5 ha in the Baramati town for self contained residential complex by Secretary (DARE) & Director General (ICAR) , Dr Mangala Rai to the Chief Secretary, GoM, Shri Johny Joseph with a CC to Collector, Pune (ICAR/D.O.No.5-26/2008-IA-II/410-12)
6 Aug 2008	EFC memo (24 Pages) of National Institute of Abiotic Stress Management, Malegaon, Baramati, Maharashtra submitted by DDG (NRM)
26 Aug 2008	Town Planner clearance notified to Collector, Pune on acquisition of land
7 Nov 2008	Collector , Pune received Resolution (No. 5) of approving land to new Institute from the Gram Panchayat, Malegaon Khurd
11 Dec 2008	Meeting to consider a proposal regarding National Institute of Abiotic Stress Management with Deemed to be University status (Annexure III) from DARE/ICAR held under the Chairmanship of Secretary (Expenditure), North Block (ICAR/ F.No.2(76)/ 2008-PIM)
15-16 Dec 2008	Visit of Secretary (DARE) & Director General (ICAR), Dr Mangala Rai to the proposed site, at Malegaon, Baramati, Maharashtra (ICAR/D.O.No. SECY.(DARE) &DG(ICAR) /2008/ 759-64)
16 Dec 2008	Approval of the Chairman, EFC (Secretary, Expenditure) (GoI/MoF (Exp).U.O. No.8(65)/PF-II/2008)
17 Dec 2008	Brief Note on visit of Visit of Secretary (DARE) & Director General (ICAR) , Dr Mangala Rai to the proposed site, at Malegaon, Baramati, Maharashtra in connection with the National Institute on Abiotic Stress management (PA/ DDG/ NRM/ 2008)
18 Dec 2008	Minutes of the EFC Meeting to consider a proposal regarding National Institute of Abiotic Stress Management from DARE/ICAR held under the Chairmanship of Secretary (Expenditure), North Block (ICAR F.No.2(76)/2008-PIM)

Date	Event
14 Jan 2009	Circular of Revenue & Forest Department , Government of Maharashtra, Mantralaya, Mumbai (No. land/1810/1027/J-5)
19 Jan 2009	Note for the Cabinet on approval of "National Institute of Abiotic Stress Management, Malegaon, Baramati, Maharashtra "with deemed-to-be-university status costing Rs 73.5 crores (GoI/MoA/DARE/F.No.13-1/2008/IA-II pages 174-195)
19 Jan 2009	District Magistrate orders to define the boundaries of land parcel No. 35 on application of Dr. Jagdish Prasad, Principal Scientist, NBSS&LUP, Nagpur on behalf of ICAR (PMACR/02/09/ Pune)
19 Jan 2009	Handing over of of 56 ha 49 r land under land group No.35 at Mouze Malegaon Khurd, Baramati Tehsil, Pune to ICAR for National Abiotic Research Center at Rs 1/- per year for 30 years as per Maharashtra Revenue Act 1966 article 20 and 31 (allotment of Government land) Rule 1971 article 5 and 6.1 by Chandrakant Dalvi, Collector, Pune (From Collector's Office, Revenue Branch)
27 Jan 2009	Agenda circulation for approval of "National Institute of Abiotic Stress Management, Malegaon, Baramati, Maharashtra" costing Rs 73.5 crores in the meeting of the Cabinet (GoI/Cabinet SecretariatNo.6/ CM/2009(i))
29 Jan 2009	Survey in the presence of Dr Jagdish Prasad, ICAR, New Delhi, Owners of the adjoining plots - Shri Narayan Laxman Jahdav, Dinkar Maruti Jahdav & Dattatraya Maruti Jahdav; Executive Members of the Panchayat body (Panch) Shri Pandurang Narayan Jahdav, Anna Ramu Gawhane, & Bhima Ramu Gawhane; Talati, J/K dvil; Shri RS Pawar, Talathi, Malegaon; Shri SH Darekar, Block Officer, Malegaon; Shri Deelip Shriram Bhalerao and Shri Sunil Ramachandra More (Total Station Survey No. 1056/ 301/ 01/2009)
29 Jan 2009	Initiation for laying foundation stone of National Institute of Abiotic Stress Management at Malegaon, Baramati by the AM's office
2 Feb 2009	Minutes of the meeting of the cabinet, South Block, New Delhi on approval of the New Institute "National Institute of Abiotic Stress Management, Malegaon, Baramati, Maharashtra" costing Rs 73.5 crores (GoI/Cabinet Secretariat No.6/ CM/2009(I) Case No.24/6/2009)
11 Feb 2009	Boundaries defined by ETS Surveyors Mr BJ Belhekar and DB Mali; Scale 1:1000 of Gut 35 (Total station survey No. 1056/ 301/ 01/ 2009)
12 Feb 2009	Director, NRC For Grapes, Pune, Dr PG Adsule was identified as coordinator Director for Inauguration Ceremony on 21 February 2009 at an estimate of Rs 18.6 lakhs (NRCG/ F.No. 2(1)/IC/08-09)
19 Feb 2009	Sanction of XI Plan EFC Scheme for setting up a new scheme "National Institute of Abiotic Stress Management, Malegaon, Baramati, Maharashtra" - Administrative approval to its implementation during XI Plan (2008-12) under Budget Demand No.2- DARE-Payment to Indian Council of Agricultural Research (ICAR) under 2415-Agricultural Research &Education-02-Soil & Water Conservation (Sub-Major Head)158 Assistance to ICAR-02- Other Natural Resource Management Institute Res. & Education Schemes including Agro-forestry Research & Education Schemes 020031-Grant-in Aid (Plan) (GoI/MoA/DARE/F.No.13-1/2008-IA-II)

Date	Event
21 Feb 2009	Foundation stone laid by Shri Sharad Pawar, Hon' Minister of Agriculture, Consumer Affairs, Food and Public Distribution, Government of India, in the presence of Shri Bala Saheb Thorat, Agriculture Minister, Shri Ajit Pawar, Minister of Water Resources (excluding Krishana Valley Irrigation Corporation), Command Area Development and Water Supply and Sanitation, Shri Dilip Valse Patil, Finanace and Planning Minister, Shri Harshawardan Patil, Minister of Cooperation, Employment Guarantee Scheme, Cultural Affairs and Parliamentary Affairs of Government of Maharashtra and Smt Supriya Sule, Member of Parliament (Rajya Sabha), Dr Mangala Rai, Secretary (DARE) and Director General (ICAR) and Dr AK Singh, DDG (NRM), ICAR etc.
23 Feb 2009	Letter by DDG, NRM, Dr AK Singh, to District Collector, Pune Shri CK Dalvi for 99 Years lease agreement on the encroachment free land at Malegaon Khurd , 5 ha for residential complex and 24 h dedicated power supply, for initiating fencing etc. (PA/DDG/NRM/2009-52)
6 March 2009	Sanction of XI Plan EFC Scheme for setting up a new scheme "National Institute of Abiotic Stress Management, Malegaon, Baramati, Maharashtra" (ICAR/ US (NRM) pages 19)
26 May 2009	Collector orders to clear encroachments in Gut 35 within eight days to SDO, Baramati (Collector Office revenue/ 600/2009)
31 May to 1 June 2009	Visit of the Committee on establishment of new National Research Institute on Abiotic Stress during XI Plan at Malegaon, Baramati, Maharashtra (PA/DDG/NRM/ 2008),
9 July 2009	Request from DDG, NRM, Dr AK Singh, to District Collector, Pune Shri CK Dalvi on 99 Years lease for developing infrastructure as per ICAR norms instead of offered Rs 1/- per annum for 30 years (PA/DDG/NRM/ 2009-17-79)
6 Aug 2009	Offer of office space to the National Institute of Abiotic Stress Management employees till proper office space is available (Programme Coordinator, KVK, Sharadanagar, Baramati)
10 Aug 2009	Transfer of Senior Scientist (ICAR Complex for NEH, Barapani) to the Institute; joined on 5 October 2009 (ICAR/ F.No.31-9/97-Per.II)
11 Aug 2009	Transfer of officers along with posts Administrative officer (from CIRCOT), joined on 19 August 2009; and FAO (from IARI) to the Institute, joined on 9 September 2009 (ICAR/ F.No.5(5)/2009/Estt.I); Transfer of Technical Officer (T-6) along with post from NBSS&LUP, joined on 24 August 2009 (ICAR/ F.No.22(5)/2009-IA II)
13 Aug 2009	Appointment of Director; Joined on17 August 2009 (ICAR/ F.No. 109(1)/ 2009-per.III)
31 Dec 2009	56.49 ha land marked in Gat 35 after allowing encroachments and leaving thirty feet road all around with a perimeter of about 3.3 km in the central portion; mutated to the institute vide Revenue Extract 7/12

PIB
पत्र सूचना कार्यालय
PRESS INFORMATION BUREAU
भारत सरकार
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Press Releases

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Thursday, January 29, 2009

Ministry of Agriculture

Establishment of National Institute of Abiotic Stress Management

16:9 IST

The Union Cabinet has approved the establishment of a new institute "National Institute of Abiotic Stress Management" costing Rs. 73.50 crores in the 11th Plan.

Abiotic stresses like drought, temperature extremes, flood, salinity, mineral toxicity and nutritive deficiency are threatening agriculture production globally. India being a tropical country faces such abiotic stresses to a significant degree which has implications for maintaining national food security.

The National Institute of Abiotic Stress Management shall have a comprehensive mandate of characterization of the occurrence of various abiotic stresses in the country impacting agriculture on a continuous basis and carry out basic and strategic research that will lead to development of technologies for mitigation and adoption of crops, livestock, horticulture, fisheries and micro organisms to such stresses. The important research programs would be in a matrix mode. Organizationally it is proposed that the institute shall conduct its research programmes through four schools viz; schools of drought stress management, atmospheric stress management, edaphic stress management and policy support research.

The institute, which will be located at Malegaon (Baramati) in Maharashtra will have a deemed to be university status.

AKT/AD/GC

(Source: http://pib.nic.in/release/release.asp?relid=47087)

Collectorate, Pune.
Pune Date:02.05.2008.

INDIAN COUNCIL OF AGRICULTURAL RESEARCH.

The land proposed for the Institute is G.No.35 of village Malegaon (Kh) Taluka Baramati district Pune admeasuring 76.49 Hectares. This land is Government land (Gairan). Out of the said land, 14 hectares Land has been proposed for Horticulture Nursary, Department of Agriculture, Maharashtra State as an alternative land for Baramati Horticulture nursery. Out of remaining land, 5 Hectares land has been allotted to Municipal Council Baramati for proposed solid waste treatment plant and 1 Hectare land has been allotted for Electric Sub-station. The remaining land admeasuring about 56 Hectares can be made available for the Institute.

Location: The land is situated at the distance of 10 Kms away from the Baramati City and about 3 Kms from Village Malegaon Bk. All amenities like School, College and other facilities are available at Malegaon Bk. The village Malegaon Bk having population 25,000 and Baramati City having population 75,000.

Water Supply: The water can be made available from perennial Nira Left Bank Canal, which is at distance of 1 Kilometer from the land.

Electric Supply: Electric sub station with the capacity of 33KV is going to be installed in the same land shortly.

Collector, Pune.

सत्यमेव जयते

CHIEF MINISTER
MAHARASHTRA

CMS/PS/10(8)/107
May 5, 2008

Dear Shri Pawar Saheb,

In the fast changing national and international context, iabiotic stresses are of paramount importance. The Global temperature is rising, rainfall dwindling, salinity and sodacity increasing and iabiotic stresses are surmounting. This calls for an in-depth study and adapting research and mitigation efforts to manage climatic change.

In this endeavour, I understand that ICAR is contemplating to establish a new national research Institute during the 11th Plan to address the entire issue in totality. I understand that for establishing such an institute, many States have shown keen interest and offered lands free of cost. I propose to offer about 150 acres of Government land free of cost for establishing this institute at Malegaon, Taluka Baramati, Distrct Pune.

I urge you to consider our request favourably by establishing this Institute in our State in the best interest of Indian farmers in general and Maharashtra farmers in particular.

With regards,

Yours sincerely,

(Vilasrao Deshmukh)

Shri Sharad Pawar,
Minister of Agriculture & Consumer Affairs,
Food and Public Distribution,
Government of India,
Krishi Bhawan,
New Delhi 110 001.

Proceedings and Recommendations of the Committee Constituted by ICAR for assessing the feasibility of establishing the National Institute on Abiotic Stress in Maharashtra

1. The Indian Council of Agricultural Research (ICAR) has decided to establish the National Institute on Abiotic Stress for carrying out research on management of various Abiotic Stresses such as drought, salinity, water logging, high temperature etc which are significantly effecting agricultural production in the country.

2. The proposed Institute will have a national mandate for carrying out basic and strategic research in the above areas through the establishment of state of art laboratories, and an experimental farm at a suitable location and also linked to a network of experimental farms located in different parts of the country representing various abiotic stresses.

3. The Council vide Office order no.1-26/2008/IA-II dated 8th May, 2008 constituted a committee with the following members to visit a site proposed by the Government of Maharashtra, in village Malegaon of Baramati Tlq. The TOR of the Committee is to assess the suitability of the site proposed by the Government of Maharashtra for setting up of the above Institute (Annexure-I). The team consisted of:

1. Dr.A.K.Singh, DDG (NRM)	- Chairman
2. Dr.P.K.Aggarwal, National Professor, IARI	- Member
3. Dr.R.B.Deshmukh, VC, MPKV, Rahuri	- Member
4. Dr.K.E.Lawande,Director, NRC for Onion & Garlic, Rajgurunagar, Pune	- Member
5. Dr.Y.S.Ramakrishna, Director, CRIDA, Hyd	- Member

4. The Committee visited the site on 21st May, 2008 and had detailed discussions with the local revenue and agricultural officers. The site is located in the revenue village of Malegaon Khurd of Baramati Tlq. of Pune district on Morgaon – Malegaon road nearly 5 km before Malegaon and about 100 km from Pune. (Map enclosed as Annexure-II). It took team over 2 hours to reach the site from Pune.

5. The actual site is consists of about 150 acres of land lying on both sides of a semi metalled road. The Committee was informed that on this site 5 ha land has been earlier earmarked for Municipality Garbage Depot and 1 ha for MSEB sub station. The land has an average slope of around 1.5 per cent and has a highly degraded black soil with very shallow depth (Lithic Ustorthents). Currently, most of the area is barren with few shrubs and native grass cover. Since it was lying fallow for several years, the topsoil has eroded and the average soil depth is now less than 5 cm over most part of the area. The soil has a pH of 7.9, EC of 0.12 dS/m.

OC of 0.5, sand:silt:clay ratio of 79.18:8.92:11.93. However, about 14 ha of land close to the irrigation channel from Nira project has a better soil depth of upto 10 cm which is cultivable but is presently allocated for a Horticulture Nursery, Department of Horticulture. The ground water is available in the area at 40-60 ft depth in the areas adjoining canal. (Analysis showed pH 7.51, EC 0.055 dS/m, Ca 4.4 m eq/l, Mg 4 m eq/l CO3 0.8 m eq/l, HCO3 8.2 m eq/l, RSC 0.6 m eq/l, Na 2.4 m eq/l and SAR 0.65).

6. Part of the area in Malegaon Khurd village is irrigated by a major canal from Veer dam on river Nira which is approximately 40 km from the site. However, the actual site is not in the command area. It is on the upper side of canal. The canal water cannot flow to this site through gravity. During the interaction with the government officials, the Committee was informed that water from the irrigation canal can be used for construction, water supply and irrigation of crops etc., for the proposed institute. However, for this a small reservoir/tank has to be built for diverting water with permission from the appropriate state authorities.

7. The area is presently connected with a 3-phase power supply. The local officials mentioned that though there are occasional power cuts. A separate dedicated transformer has to be provided for ensuring reliable power supply to the proposed institute.

8. The actual site proposed for the institute is not under cultivation with very shallow soil depth and is classified as grazing land by the local administration. In the neighbouring areas, (adjoining this area on both sides) farmers are cultivating pomegranate with drip irrigation. In assured irrigated areas (lower side beyond the site area) under the canal command, farmers are growing sugarcane.

9. The Committee also visited the KVK at Malegaon and interacted with the officials of the educational institutions run by the SVPM trust. There are well established Engineering and Pharmacy Colleges with good infrastructure and residential facilities. Later the members also visited Baramati town and different educational institutions including the Vidya Pratistans Biotechnology and Engineering Colleges. The Committee observed that these institutions are well established and are of very high standards. They are also being well managed and have a large student population.

10. On 22nd May, 2008, the Committee members interacted with District Collector of Pune. During the interaction, the Committee discussed the purpose of visit and the expectations in terms of logistics, infrastructure and manpower to make it as a world-class center on Abiotic Stress research. The District Collector assured the Committee that the Maharashtra Government will provide all the support in terms of ensuring uninterrupted water and power

supply. He informed us that a municipal garbage depot has been shifted from that area and 14 ha cultivable land on the lower side of the site towards the irrigation canal which is currently allotted to a nursery will be relocated. The area (1.0 ha) earmarked for the MSEDCL which is now located in the center of the site can be shifted to one corner.

Based on the site visit, interaction with the local officers visit to the surrounding areas and briefing by the District Collector, Pune, the Committee has noted the following points regarding site suitability.

1. Availability of 150 acres of contiguous land at one place and the offer of Government of Maharashtra to allot this land free of cost.

2. The site is well connected by a metalled road and appears to be suitable for construction of office complex and laboratories etc. It is a drought prone rainfed area which also encounters high temperature stress.

3. The Government has assured to provide water supply through a proposed reservoir and dedicated power supply through a separate transformer.

4. The neighboring areas like Malegaon and Baramati are well developed with large number of educational and technical institutions.

5. The district collector has indicated the possibility of making available a separate piece of land for residential purpose of the faculty in the main Baramati town.

6. However, most of the area in the site has a shallow depth with surface soil erosion. The 14 ha land with a slight deeper soil within the proposed site which was initially proposed for a nursery-has now been offered by the District Collector for the institute research farm. This farm area can partially meet the requirement of conducting field experiments.

7. For other stresses like salinity, nutrient stress, etc. we may have to identify alternate locations near by or elsewhere in the country.

In view of the above the Committee recommends the following:

1. Accept the proposal of the Government of Maharashtra's offer of the site for locating the National Institute of Abiotic Stress.
2. The 14 ha of land earmarked for Horticulture Nursery, Department of Horticulture be allotted to the Institute for its experimentation.

3. Since the canal is located at lower alleviation, permission for using the canal water for setting up the Institute as well as for continuous water supply be granted.
4. A tank/reservoir will also have to be built for which permission from the appropriate state authorities is to be given.
5. Since the Institute would be working on using modern tools for its research investigation, a dedicated power supply is of utmost importance. A separate transformer for the institute and its laboratories will have to be provided with dedicated express line at the rate of agricultural tariff.
6. The land allotted for the Municipality Garbage Depot would be shifted to some other site outside the earmarked area (A decision for this has already been taken).
7. In addition, we may request the Government of Maharashtra to allocate another 10 ha area of deep soil within the vicinity of one to two km from the site so that the scientific experiments on different stress levels can be conducted.
8. The Committee also recommends allotment of 5 ha of land in the main Baramati town for a self-contained residential complex including a guesthouse for the Institute.

(A.K. Singh)	(R.B. Deshmukh)	(K.E. Lawande)
DDG (NRM)	Vice Chancellor, MPKV, Rahuri	Director, NRC for Onion & Garlic, Pune
Chairman	Member	Member

(Y.S. Ramakrishna)	(P.K. Aggarwal)
Director, CRIDA, Hyderabad	National Professor, IARI, Pusa
Member	Member

वाचले :- १) डॉ. मंगला राय सचिव एवं महानिदेशक, भारत सरकार कृषी अनुसंधान और शिक्षा विभाग एवं भारती कृषी अनुसंधान परिषद कृषी मंत्रालय, नवी दिल्ली यांचे दिनांक १६/७/२००८ रोजीचे पत्र.

२) तहसिलदार बारामती यांचेकडिल अहवाल क्रमांक जमीन/कावि/१०८९/२००८ दिनांक ९/७/२००८

३) नगर रचनाकार, बारामती यांचेकडिल जा.क्र. प्रा.यो. पुणे/जागा मागणी/मौजे माळेगाव खु/ता. बारामती/ग. नं. ३५/नरबा/१५४ दिनांक २६/८/२००८

४) ग्रामपंचायत माळेगाव खुर्द ता बारामती यांचा ठराव क्रमांक ५ दिनांक ७/११/२००८

५) शासन, महसूल व वन विभाग मंत्रालय, मुंबई ४०० ०३२ यांचेकडिल ज्ञापन क्रमांक जमीन-३४०८/१८१०/प्रक्रपु १०२७/ज-५ दिनांक १४ जानेधारी २००९

जिल्हाधिकारी कार्यालय पुणे
महसुल शाखा
क्रमांक पमअ/सीआर/०२/०९
पुणे १ दिनांक ०१ /१/२००२

विषय :- जमीन-पुणे

केंद्र शासनाच्या भारतीय कृषी अनुसंधान परिषदेत पर्यावरण विषयक संशोधन केंद्रासाठी मौजे माळेगाव खुर्द ता. बारामती येथील जमीन गट नंबर ३५ मधील क्षेत्र ५६ हेक्टर ४९ आर ही जमीन नामनात्र दराने उपलब्ध करुन देणेबाबत.

आदेश,

डॉ. मंगला राय सचिव एवं महानिदेशक, भारत सरकार कृषी अनुसंधान और शिक्षा विभाग एवं भारतीय कृषी अनुसंधान परिषद मंत्रालय, कृषी भवन, नयी दिल्ली यांचे दिनांक १६/७/२००८ रोजीचे पत्रान्वये मौजे माळेगाव खुर्द ता. बारामती जि. पुणे येथील जमीन गट नंबर ३५ मधील ६० हेक्टर जागा उपलब्ध करुन देणेबाबत कळविणेत आलेले होते. त्याअनुषंगाने प्रकरणी तहसिलदार बारामती यांचेमार्फत सविस्तर चौकशी व स्थळपाहणी करण्यात आली त्यानुसार त्यांचेकडिल अहवाल क्रमांक जमीन/दशि/१०८९/२००८ दिनांक ९/७/२००८ अन्वये गट नंबर ३५ मधील ६० हेक्टर सदर संस्थेस देणेस हरकत नसल्याचे कळविले आहे. त्याचप्रमाणे नगर रचनाकार, बारामती यांनी त्यांचेकडिल जा.क्र. प्रा.यो. पुणे/जागा मागणी/मौजे माळेगाव खु./ता बारामती/ग.नं. ३५/नरबा/१५४ दिनांक २६/८/२००८ अन्वये संस्थेने विषयाधिन जागा कृषी संशोधन

(1)

(अबायोटिक इन्स्टीटयुट) करिता मागणी केली आहे. मंजुर प्रादेशिक योजनेतील तरतुदीनुसार उक्त वापर विषयाधिन जागेमध्ये अनुज्ञेय होता असा अभिप्राय दिलेला आहे. त्याअनुषंगाने संस्थेस सदर जागा प्रदान करणेबाबत मा. आयुक्त पुणे विभाग पुणे यांचेमार्फत शासनास इकडील पत्र क्रमांक पमअ/कावि/१८२४/२००८ दिनांक ५/९/२००८ अन्वये अहवाल सादर करणेत आलेला होता.

भारतीय कृषी अनुसंधान परिषद ही केंद्र शासनाची राष्ट्रीय स्तरावरील कृषी विषयक संशोधन करणारी संस्था असून सदर संस्थेकरिता प्राधान्याने जमीन देणे आवश्यक आहे. संस्थेच्या माध्यमातुन पुणे जिल्हयात पर्यावरण विषयक व कृषी संशोधन करणारे एक संशोधन केंद्र उभारणे प्रस्तावित आहे. बदलत्या हवामानामुळे पिकाची वाढ, मौसमी पर्जन्यातील बदल तसेच जमिनीची खारवड अवस्था व पीक वाढीसाठी योग्य जागी उपचार व्यवस्थापन या वरील संशोधन कृषी क्षेत्रा समोरील ,अडचणींच्या पार्श्वभुमीवर आवश्यक आहे. याबाबत शासन स्तरावर विचार होऊन शासन, महसुल व वन विभाग, मंत्रालय, मुंबई यांचेकडिल ज्ञापन क्रमांक जमीन ३४०८/१८१०/प्रक्र १०२७/ज-५ दिनांक १४ जानेवारी २००८ अन्वये भारतीय कृषी अनुसंधान परिषदेच्या पर्यावरण विषयक संशोधन करण्यासाठी मौजे माळेगाव खुर्द ता. बारामती जि. पुणे येथील जमीन गट नंबर ३५ मधील ५६ हेक्टर ४९ आर जमिन संस्थेस नाममात्र रुपये १/- इतके वार्षिक भाडे आकारुन ३० वर्षांच्या कालावधीसाठी काही अटी व शर्तीवर भाडेपट्टयाने मंजुरी देण्यात आलेली आहे.

महाराष्ट्र जमीन महसुल अधिनियम १९६६ चे कलम २० व ३१ व त्याखालील (शासकीय जमिनींची विल्हेवाट) नियम १९७१ मधील नियम ५ व ६ मधील तरतुदीनुसार मी, चंद्रकांत दळवी जिल्हाधिकारी, पुणे मला प्राप्त अधिकाराचा वापर करुन मौजे माळेगाव खुर्द ता. बारामती जि. पुणे येथील गट नंबर ३५ मधील ५६ हेक्टर ४९ आर क्षेत्र केंद्र शासनाच्या भारतीय कृषी अनुसंधान परिषद या संस्थेस खालील अटी व शर्तीवर ३० वर्षाच्या कालावधीसाठी भाडेपट्टयाने प्रदान करीत आहे

अटी व शर्ती

१. मंजुर जागेचा प्रदान आदेश महाराष्ट्र जमीन महसूल अधिनियम १९६६ व त्या अंतर्गतचे नियमावलीतील तरतुदीस अधीन राहतील.
२. केंद्र शासनाच्या भारतीय कृषी अनुसंधान परिषदेस पर्यावरण विषयक संशोधन केंद्रासाठी उक्त नमुद क्षेत्र नाममात्र रुपये १/- इतके वार्षिक भाडे आकारुन प्रदान करणेत येत असून सदरचा आदेश या विषयांकित जागेकरीताच लागु राहिल व अन्य प्रकरणात पुर्वोदाहरण म्हणून समजण्यात येणार नाही.
३. प्रस्तावित क्षेत्रास १२.०० मी. रुंदीचा पोहोच रस्ता ठेवणे आवश्यक आहे.
४. प्रादेशिक विकास नियंत्रण नियमावलीनुसार शेती विभागात असलेला वापर व चटई क्षेत्र निर्देशांक अनुज्ञेय राहील

(2)

५. संस्थेस प्रस्तुत आदेशान्वये प्रदान करणेत येत असलेली जमीन संस्था गहाणखत, बक्षीसपत्र, विक्री व अन्य कोणत्याही प्रकारे शासनाचे पुर्व परवानगी शिवाय हस्तांतरण करणार नाही.

६. ज्या प्रयोजनासाठी जमीन प्रदान करण्यात आलेली आहे त्याच प्रयोजनासाठी जमिनीचा वापर करण्यात यावा.

७. संस्था सदर क्षेत्र भोगवटादार वर्ग २ म्हणून धारण करील.

८. प्रदान करण्यात आलेल्या जमिनीवर बांधकाम करताना स्थानिक विकास नियमावलीनुसार व स्थानिक प्राधिकरणाच्या मान्यतेने बांधकाम करण्यात यावे. तथापि विकास नियंत्रण नियमावलीत काहीही तरतुद असली तरी असे बांधकाम फक्त ज्या प्रयोजनासाठी जमिन प्रदान करण्यात आली आहे अश्या प्रयोजनासाठी बांधकाम करण्यात येईल.

९. प्रतिग्रहिता संस्था जागेचा ताबा घेतल्यापासून दोन वर्षाचे आत १०० चौ.मी. मध्ये एक याप्रमाणे वृक्ष लागवड करुन त्याचे संगोपन करेल.

१०. प्रतिग्रहिता संस्था आदेशाच्या तारखेपासून तीन महिन्याचे आंत महाराष्ट्र जमीन महसूल अधिनियम (शासकीय जमिनीचे विल्हेवाट) नियम १९७१ मधील तरतुदीनुसार विहीत नमुन्यात सनद करुन घेईल.

११. ३० वर्षाची भाडेपट्ट्याची मुदत संपण्याअगोदर एक महिना प्रतिग्रहिता संस्थेने मुदतवाढीसाठी अर्ज करणे आवश्यक आहे.

१२. संस्थेमध्ये जाती, धर्म, लिंगभेद न करता सर्वांसाठी प्रवेश खुला राहील.

१३. उपरोक्त अटी व शर्तीचे उल्लंघन केल्यास मंजुर केलेली जागा परत शासनाकडे घेणेस व जागा मंजुरी आदेश रद्द होणेस पात्र राहील. त्याबाबत संस्थेस मोबदला मागण्याचा हक्क राहणार नाही.

१४. वरील सर्व अटी व शर्ती मान्य असलेबाबत प्रतिग्रहिता संस्था रक्कम रुपये १००/- चे मुद्रांक पेपरवर हमी पत्र सादर करील.

सही/(चंद्रकांत दळवी)
जिल्हाधिकारी, पुणे

प्रति,

भारतीय कृषी अनुसधान परिषद
नवी दिल्ली.

प्रत :- मा. अवर सचिव महसूल व वन विभाग मंत्रालय, मुंबई यांजकडे माहितीसाठ सविनय सादर

प्रत :- मा. आयुक्त पुणे विभाग पुणे यांचेकडे माहितीसाठी सविनय सादर

प्रत :- उपविभागीय अधिकारी बारामती उपविभाग बारामती यांचेकडे माहितीसाठी रवाना

(3)

प्रत :- तहसिलदार बारामती यांचेकडे पुढील कार्यवाहीसाठी

२/- प्रस्तुतचे कामी विषयांकित गायरान जमीन गट नंबर ३५ मधील उक्त नमुद ५६ हेक्टर ४९ आर क्षेत्राचा ताबा प्रतिग्रहिता यास द्यावा तसेच ताबा पावती, पंचनामा व मोजणी नकाशासह अहवाल या कार्यालयास सादर करावा. ताबे कार्यवाहीपूर्वी प्रतिग्रहिता यांचेकडून उपरोक्त अट क्रमांक १६४ मध्ये नमुद केलेप्रमाणे संस्थेकडून रक्कम रुपये १००/- रुपॅम्प पेपरवर हमी घेण्यात यावे. तसेच नाममात्र वार्षिक भाडे रक्कम रुपये १/- वसुल करण्यात यावी.

प्रत :- तालुका निरीक्षक भुमी अभिलेख बारामती यांचेकडे माहितीसाठी व पुढील कार्यवाहीसाठी रवाना.

२/ विषयांकित जागेची नियमानुसार तात्काळ मोजणी करुन देणेत यावी.

जिल्हाधिकारी पुणे करिता

(A)

वाचले :- उपसचिव, महाराष्ट्र शासन यांचेकडिल शासन निर्णय क्रमांक मफुकृवि २००९/प्रक्र १८/७ अे मंत्रालय मुंबई ४०० ०३२ दिनांक २८ ऑगस्ट २००९ व दिनांक २३ सप्टेंबर २००९

जिल्हाधिकारी कार्यालय पुणे
महसूल शाखा
क्रमांक पमअ/सीआर/२२/ २००९
पुणे १ दिनांक २९/१०/२००९

विषय :- जमीन-पुणे
भारतीय कृषि अनुसंधान परिषद, नवी दिल्ली या संस्थेस बारामती, जिल्हा पुणे येथील औदयोगिक क्षेत्रातील जमिन उपलब्ध करुन देणेकरिता आकस्मिकता निधीव्दारे प्राप्त रुपये १,६८,००,०००/- वितरीत करण्याबाबत.

आदेश,

भारतीय कृषि अनुसंधान परिषद, नवी दिल्ली यांना बारामती औदयोगिक क्षेत्रातील राज्य परिवहन महामंडळाकडे असलेल्या भूखंड क्रमांक बी - १ चे विभाजन करुन त्यातील ४०,००० चौरस मीटरचे प्रचलित नियमानुसार हस्तांतरण करुन जमिन उपलब्ध करुन देणेबाबत वस्तुस्थिती अहवाल शासनास सादर करणेत आलेला होता.

शासन निर्णय क्रमांक मफुकृवि २००९/प्रक्र १८/७ अे दिनांक २८ ऑगस्ट २००९ व दिनांक २३ सप्टेंबर २००९ अन्वये भारतीय कृषी अनुसंधान परिषद, नवी दिल्ली यांना बारामती येथे संस्थेच्या / संशोधन कर्मचा-यांच्या निवासासाठी व इतर कामाकरिता जमिन उपलब्ध करुन दयावयाची आहे. सदर जमिनीकरिता महाराष्ट्र राज्य औदयोगिक विकास महामंडळास रुपये १.६८ कोटी इतकी आकस्मिकता निधीव्दारे रक्कम अपरोक्त शासन निर्णयाव्दारे वितरीत करण्यात आलेली आहे. सदर जमिन भारतीय कृषि अनुसंधान परिषद यांना बारामती औदयोगिक क्षेत्रातील जमिन संशोधन / निवासी व इतर कामासाठी लागणारी भूखंड क्रं. बी-१ मधील ४०,००० चौ.मी. क्षेत्र हे कार्यकारी अधिकारी महाराष्ट्र औदयोगिक विकास महामंडळ व जिल्हाधिकारी पुणे यांनी प्रचलित आदेश विचारात घेऊन जमिनीचे हस्तांतरण भारतीय कृषि अनुसंधान परिषद नवी दिल्ली यांना तात्काळ करावे

या करिता येणारा खर्च शासन ज्ञापन, वित्त विभाग क्र. आकनि-११०९/२४ अर्थसकल्प १३ दिनांक २५ ऑगस्ट २००९ अन्वये मंजुर करण्यात आलेल्या आकस्मिकता निधी अग्रिम रक्कम रुपये १,६८,००,०००/- यातून भागविण्यात यावा.

सबब, उक्त शासन निर्णयाव्दारे मला प्राप्त असलेल्या अधिकाराचा वापर करुन मी जिल्हाधिकारी, पुणे भारतीय कृषि अनुसंधान परिषद, नवी दिल्ली यांना बारामती जिल्हा पुणे येथे संस्थेच्या/सशोधन कर्मचा-यांच्या निवासासाठी व इतर कामाकरिता जमिन उपलब्ध करुन देणेकरिता आकस्मिकता निधाव्दारे प्राप्त रक्कम रुपये १,६८,००,०००/- "Dy. Chief Account Officer", MIDC, Chinchwad यांचेकडे वर्ग करणेबाबत या आदेशाव्दारे मंजुरी देत आहे.

सही/-(चंद्रकांत दळवी)
जिल्हाधिकारी पुणे

प्रति :- लेखा शाखा, जिल्हाधिकारी कार्यालय, पुणे

उक्त प्रकरणी आकस्मिकता निधीव्दारे प्राप्त रुपये १,६८,००,०००/- रक्कम "Dy. Chief Account Officer", MIDC, , Chinchwad याचे नावे तात्काळ वर्ग करणेत यावे.

प्रत :- Dy. Chief Account Officer,
MIDC, Chinchwad
प्रत :- प्रादेशिक अधिकारी, मआविम पुणे ३
प्रत :- उपविभागीय कृषि अधिकारी, अहमदनगर
प्रत :- उपसचिव, महाराष्ट्र शासन कृषि, पशुसवर्धन, दुग्धव्यवसाय विकास व मत्स्यव्यवसाय विभाग, मंत्रालय, मुंबई ४११ ०३२ यांस्तकडे माहितीस्तव सादर
प्रत :- मा. आयुक्त पुणे विभाग पुणे यांस्तकडे माहितीस्तव सादर
प्रत :- उपविभागीय अधिकारी बारामती उपविभाग बारामती
प्रत :- तहसिलदार बारामती

माहितीसाठी व पुढील आवश्यक त्या कार्यवाहीसाठी.

जिल्हाधिकारी पुणे करिता

ताबे पावती

ताबा देणार :- मंडल अधिकारी माळेगांव बु.
ता. बारामती जि. पुणे

ताबा घेणार :- डायरेक्टर
नॅशनल इन्स्टिट्युट ऑफ ॲबीटिक स्ट्रीस मॅनेजमेंट इंडियन कौन्सील ॲग्रीकल्चर रिसर्च माळेगांव खुर्द
ता. बारामती जि. पुणे.

कारणे ताबे पावती करुन देतो की, मौजे माळेगांव खुर्द ता. बारामती जि. पुणे येथील गट नंबर ३५ मधील क्षेत्र ५६ हेक्टर ४८ आर पैकी जमिन ५६ हेक्टर ४८ आर शासन ज्ञापन क्र जमिन १३ ४०७/१-९०/प्र.क्र.५/७०२८/ज. दि १४.१.२००९ अन्वये भारतीय अनुसंधान परिषद, नवी दिल्ली यांना प्रदान केलेली आहे. तसेच मा. जिल्हाधिकारी पुणे (महसूल शाखा) यांचेकडील पत्र क्रमांक पमअ/कावि/६००/०९ दि. २६/५/२००९ अन्वये ताबा देणेबाबत सूचित केले आहे. मा. उपविभागीय अधिकारी बारामती उपविभाग बारामती यांचेकडील पत्र क्र. जमीन/कावि/१२५०/०९ दि. ३०/५/०९ अन्वये ताबा देणेबाबत सूचित केले होते. त्याप्रमाणे मा. तहसिलदार यांचेकडील पत्र जा.क्र जमिन/कावि/१६६८/०९ दि. ११/१२/०९ अन्वये व दिनांक १५/१२/२००९ रोजी मा. तहसिलदार सो. बारामती यांनी दिलेल्या तोंडी सूचनेनुसार ताबा दिनांक १५/१२/२००९ रोजी दिलेला होता. परंतु दिनांक २८/१२/२००९ रोजी मा. उपविभागीय अधिकारी बारामती उपविभाग बारामती व तहसिलदार बारामती यांनी दिलेल्या तोंडी सूचनेनुसार गट नं ३५ मधील क्षेत्र ५६.४८ आर पैकी अतिक्रमण क्षेत्र सोडून व गायरानातील ३० फूट रस्ता सोडण्याच्या अटीसापेक्षतेसाठी सोडून ५६ हेक्टर ४८ आर जमिन आज रोजी तालुका भूकर मापक श्री. माळी, कामगार तलाठी माळेगांव खुर्द यांचे समक्ष डायरेक्टर नॅशनल इन्स्टिट्युट ऑफ ॲबीटिक स्ट्रीस मॅनेजमेंट इंडियन कौन्सील ॲग्रीकल्चर रिसर्च माळेगांव खुर्द

[P.T.O.]

ता. बारामती. जि. पुणे यांचे ताब्यात खुणा हद्दीचे खांब
लावून दिला आहे. त्याच्या चतुःसीमा पुढील प्रमाणे.
पश्चिमेला गट नं ३८ बी व गट नं. ३८ लगत अतिक्रमण
क्षेत्र व क्षेत्रालगत शेतकऱ्यांना त्यांच्या शेतासाठी गायरानातील
मोकळ्या जागेतील ३० फूट रस्ता सोडून उत्तरेला गट नं.
३८अ, ३४, ३३, ३२ लगत (अंशतः अतिक्रमण भाग/क्षेत्र) शेतकऱ्यांना त्यांच्या शेतासाठी
गायरानातील मोकळ्या जागेतील ३० फूट रस्ता सोडून,
पूर्वेला गट नं. ३०, २९, २८, २४, २३ लगत अतिक्रमण
क्षेत्र व क्षेत्रालगत शेतकऱ्यांना त्यांच्या शेतासाठी गायरानातील
मोकळ्या जागेतील ३० फूट रस्ता सोडून, दक्षिणेला
गट नं. ३४ पैकी उर्वरित क्षेत्र [?] वरील प्रमाणे ताबा आज
तारीख ३१/१२/२००९ रोजी मिळाला आहे व त्याबाबत आमची
काही हरकत अगर तक्रार नाही. ही ताबेपावती करून
दिली.

ताबा देणार

कामगार तलाठी
मालेगांव खुर्द
ता. बारामती. जि. पुणे

भूकरमापक
बारामती
तालुका निरीक्षक भूमी अभिलेख
कार्यालय बारामती.

मंडल अधिकारी
माळेगांव बु.
ता. बारामती. जि. पुणे

ताबा घेणार
31/12/09
डायरेक्टर
नॅशनल इन्स्टिट्यूट
ऑफ ॲबायोटिक स्ट्रेस
मॅनेजमेंट इंडियन कौन्सिल [?]
ॲग्रीकल्चर रिसर्च
माळेगांव खुर्द
ता. बारामती. जि. पुणे.

पंचनामा

आम्ही खालील सह्या करणार पंचलोक नामे (१) बापूराव दादासो कुंभारकर (२) राजेंद्र अर्जुन चव्हाण (३) दादासो गोपीनाथ शाळके रा. माळेगांव खुर्द ता. बारामती जि पुणे मंडळ अधिकारी माळेगांव बा।, कामगार तलाठी माळेगांव खुर्द, भूकरमापक बारामती यांनी समक्ष बोलावून गायरान गट नं. ३४ मधील अतिक्रमण क्षेत्र व गायरानातील ३० फूट रस्ता सोडल्यानंतर जे क्षेत्र शिल्लक राहिले ते सोडून ५८ हेक्टर ४८ आर क्षेत्राचा ताबा डायरेक्टर नॅशनल इन्स्टिट्यूट ऑफ ॲबिटिक स्ट्रेस मॅनेजमेंट इंडियन कौन्सिल ऑफ ॲग्रीकल्चर रिसर्च माळेगांव खुर्द ता. बारामती जि पुणे यांना द्यावयाचा आहे. असे सांगितलेवरून भूकरमापक श्री माळी यांनी दाखविलेल्या हद्दीनुसार खालील चतुःसिमेप्रमाणे ताबा हद्दीचे खांब लावून आमचे समक्ष दिला.

पश्चिमेला गट नं ३९ ब व गट नं. ३८ मधील अतिक्रमण क्षेत्र व क्षेत्रालगत शेतकऱ्यांना जाण्यायेण्यासाठी गायरानातील मोकळ्या जागेतील ३० फूट रस्ता सोडून, उत्तरेला गट नं ३९ अ, ३७, ३३, ३२ मधील क्षेत्रास अतिक्रमण भाग सोडून शेतकऱ्यांना जाण्यायेण्यासाठी गायरानातील मोकळ्या जागेतील ३० फूट रस्ता सोडून, पूर्वेला गट नं ३०, २९, २८, २४, २३ मधील अतिक्रमण क्षेत्र व क्षेत्रालगत शेतकऱ्यांना जाण्या येण्यासाठी गायरानातील मोकळ्या जागेतील ३० फूट रस्ता सोडून, दक्षिणेला गट नं ३४ पैकी उर्वरीत क्षेत्र वरील प्रमाणे ताबा आज तारीख ३१।१२।२००९ रोजी मिळाला. याबाबत आमची काही हरकत अगर तक्रार नाही ही खात्रीपावती करून दिली. वरील प्रमाणे एकूण ५८ हेक्टर ४८ आर क्षेत्राचा ताबा आमचे समक्ष डायरेक्टर नॅशनल इन्स्टिट्यूट ऑफ ॲबिटिक स्ट्रेस मॅनेजमेंट इंडियन कौन्सिल ऑफ ॲग्रीकल्चर रिसर्च माळेगांव खुर्द ता बारामती जि. पुणे यांचेकडे आज तारीख ३१।१२।२००९ रोजी ताबा दिला. सदरचा पंचनामा सकाळी ९-०० वाजता सुरू होवून दुपारी १२-०० वाजता संपला.

तारीख ३१।१२।२००९

[P.T.O.].

समक्ष

कामगार तलाठी
माळेगांव खुर्द
ता बारामती जि. पुणे

भूकरमापक बारामती
तालुका निरीक्षक भूमी अभिलेख
कार्यालय बारामती

मंडल अधिकारी
माळेगांव बु
ता. बारामती
जि. पुणे

डायरेक्टर 31/12/07
नॅशनल इन्स्टिट्यूट
ऑफ अॅबायोटिक स्ट्रेस
मॅनेजमेंट इंडियन कौन्सिल
अॅग्रीकल्चर रिसर्च
माळेगांव खुर्द
ता. बारामती. जि. पुणे.

बापूराव दादासो कुदळे

राजेंद्र शाहुजी चव्हाण

संतोष अर्जुन चव्हाण

केदेल शिंदे
दादासो गोपीनाथ आडेख

जबाब

आम्ही स्थानीक व्यक्ती कामगार कर्मचारी / अधिकारी नॅशनल इन्स्टिट्युट ऑफ ॲबायोटिक स्ट्रेस मॅनेजमेंट इंडियन कौन्सील ऑफ ॲग्रीकल्चर रिसर्च माळेगांव खुर्द ता. बारामती जि. पुणे. मंडल अधिकारी माळेगांव बु. यांनी समक्ष विचारले-वरुन जबाबाविषयी [illegible] लिहुन देतो की, आज रोजी मा. उपविभागीय अधिकारी बारामती उपविभाग बारामती व मा. तहसिलदार बारामती यांनी दिनांक ४-०९-२००९ रोजी दिलेल्या नोटीस सुचनेप्रमाणे गट नं ३४ मधील क्षेत्र ५६-३८ आर पैकी अतिक्रमण क्षेत्र व [illegible] रस्ता [illegible] ५८ हेक्टर ७२ आर जमीन [illegible] रोजी तालुका [illegible] श्री [illegible], कामगार तलाठी माळेगांव खुर्द, मंडल अधिकारी माळेगांव बु. यांचे समक्ष पुढील [illegible] प्रमाणे जागा मिळाला

[illegible] गट नं ३६ व गट नं ३८ [illegible] अतिक्रमण [illegible] व [illegible] [illegible] [illegible] [illegible] ३० फुट रस्ता सोडून, उत्तरेला गट नं ३९, ३४, [illegible] [illegible] [illegible] अतिक्रमण भाग सोडून [illegible] [illegible] [illegible] [illegible] २० फुट रस्ता सोडून, पुर्वेला गट नं ३५, ३८, ४०, ४५/२३ [illegible] अतिक्रमण क्षेत्र व [illegible] [illegible] [illegible] [illegible] [illegible], [illegible] २० फुट रस्ता सोडून, दक्षिणेला गट नं ३४ पैकी [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] हा जबाब लिहुन दिला तारीख ३०/०९/२००९

समक्ष

कामगार तलाठी
माळेगाव खुर्द
ता बारामती जि पुणे

रामेश्वर
नॅशनल इन्स्टिट्युट
ऑफ ॲबायोटिक स्ट्रेस
मॅनेजमेंट इंडियन कौन्सील
ऑफ ॲग्रीकल्चर रिसर्च
[CTO]

मुख्य सर्वेक्षक बारामती
तालुका निरीक्षक भूमि अभिलेख
कार्यालय बारामती

माळेगाव खुर्द
ता बारामती जि पुणे

मंडल अधिकारी
माळेगाव बु॥
ता बारामती जि पुणे

05 Jan 10 15:10   [illegible]   952112224386   p.1

Kind Attention

Hon. Board Sir,

Divisional Commissioner, Pune.

गा.नं. क्र. ७ ७ अ १२

गांव माळेगाव खुर्द   तालुका बारामती   जिल्हा पुणे

भूमापन क्रमांक / पट क्रमांक	हि.क्र.	धारणा प्रकार	भोगवटादाराचे नांव	खाते क्रमांक
६६	—	—	महाराष्ट्र शासन [illegible] हे.आर. [illegible] [illegible] [illegible] [illegible]	[illegible]
भूमापनाचे स्थानिक नांव			सार्वजनिक रस्ता [illegible]	[illegible]
लागवडीयोग्य क्षेत्र		हेक्टर / आर	बारामती नगर परिषद हे.आर. [illegible]	भारतीय कृषि अनुसंधान परिषद [illegible] संशोधन केंद्र हे.आर. [illegible]
जिरायत			महाराष्ट्र राज्य विद्युत वितरण कंपनी हे.आर. [illegible]	[illegible]
बागायत		— —	भारतीय कृषि अनुसंधान परिषद [illegible] संशोधन केंद्र हे.आर. [illegible]	[illegible]
भात शेती			[illegible]	कुळाचे नांव
एकूण		— —	[illegible]	[illegible]
पो.ख. [illegible]		[illegible]		
वर्ग (अ)				
वर्ग (ब)				
एकूण		[illegible]	[illegible]	
आकार		रुपये / पैसे		इतर अधिकार
जुडी अथवा विशेष आकार				भू-मापन चिन्ह
पाणीआकार				

(मागे पहा)

गाव नं. १२

वर्ष	जमीन कसणाराचे नाव	रीत	हंगाम	पिकाखालील क्षेत्र: मिश्र पिकाचे एकूण क्षेत्र — मिश्र पिकाचा संकेतांक	जलसिंचन	अजल सिंचन	मिश्र पिकातील प्रत्येक पिकाचे क्षेत्र — पिकाचे नाव	जलसिंचन	अजलसिंचन	निर्भेळ पिकाचे क्षेत्र — पिकाचे नाव	जलसिंचन	अजल सिंचन	पडीत व पिकास निरुपयोगी असा जमिनीचा तपशील — प्रकार	क्षेत्र	जल सिंचनाचे साधन	शेरा
१	२	[illegible]	४	५	६	७	८	९	१०	११	१२	१३	१४	१५	१६	१७
२००८ [illegible]	सरकार [illegible]	५६-९१ / १					[illegible] ५६-९१									
[illegible]	[illegible]	०-३० / १					[illegible] ०-३०									
[illegible]	[illegible]	५-०० / १					[illegible] ५-००									
[illegible]	महाराष्ट्र [illegible] विद्युत [illegible] कंपनी	२-० / १					[illegible] १-००									

[illegible] तारीख – [illegible]/९/२०१०

श्री. आर. एस. पवार
गाव कामगार तलाठी
मौजे [illegible] ता. बारामती जि. पुणे

चलन नंबर

स्टेट बँक ऑफ इंडियामध्ये

बारामती येथील ——— **सब ट्रेझरीत** ——— भरलेल्या रोख रक्कमेचे चलन

रक्कम पाठविणाराचे भरावयाचे		
रक्कम कोणी आणून दिली त्याचे नांव }		
ज्याच्या वतीने रक्कम भरण्यात आली त्या मनुष्याचे नांव किंवा हुद्दा व पत्ता }		
पाठविलेल्या रकमेचा व अधिकार पत्र कोणतेही असल्यास त्याचा पूर्ण तपशील	रुपये	पैसे
	₹ ₹ -	००
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REVENUE

0		9		5		6		
0	0	2	9	0	2	7	6	0	1

बरोबर आहे, पैसे घेऊन पावत्या द्याव्यात

तारीख 24/12/10

सही

अक्षरी रुपये

ट्रेझरर　　अकौंटंट　　ट्रेझरी ऑफीसर / एजंट

Foundation Stone

राष्ट्रीय अजैविक स्ट्रैस प्रबंधन संस्थान (भा.कृ.अनु.प.)

बारामती, महाराष्ट्र

का

शिलान्यास समारोह

माननीय श्री शरद पवार

कृषि उपभोक्ता मामले खाद्य एवं सार्वजनिक वितरण मंत्री

भारत सरकार

के कर कमलों द्वारा

शनिवार, दिनांक 21 फरवरी, 2009 प्रातः 10 बजे

आपकी गरिमामय उपस्थिति प्रार्थनीय है।

श्री बालासाहेब थोरात

कृषि मंत्री, महाराष्ट्र सरकार, कार्यक्रम की अध्यक्षता करेंगे।

इस अवसर पर

श्री अजीत पवार

जल संसाधन (कृष्णा घाटी सिंचाई निगम को छोड़कर)

कमान क्षेत्र विकास एवं जल आपूर्ति तथा स्वच्छता मंत्री, महाराष्ट्र सरकार

श्री दिलीप वलसे पाटील

वित्त एवं योजना मंत्री, महाराष्ट्र सरकार

श्री हर्षवर्धन पाटील

सहकारिता, रोजगार गारंटी स्कीम, सांस्कृतिक मामले एवं

संसदीय कार्य मंत्री, महाराष्ट्र सरकार

श्रीमती सुप्रिया सुले

संसद सदस्य (राज्य सभा)

डा. मंगला राय

सचिव (डेयर) एवं महानिदेशक, भा.कृ.अनु.प., नई दिल्ली

भी उपस्थित होंगे।

डा. अनिल कुमार सिंह

उप महानिदेशक (एनआरएम) भा.कृ.अनु.प. नई दिल्ली

शिलान्यास समारोह

राष्ट्रीय अजैविक स्ट्रैस प्रबंधन संस्थान

बारामती (महाराष्ट्र)

कार्यक्रम

शनिवार, 21 फरवरी, 2009

09.45 10.00 बजे	गणमान्य अतिथियों का आगमन
10.00 10.15 बजे	शिलान्यास का अनावरण
10.15 10.25 बजे	गणमान्य अतिथियों का स्वागत, **डा. अनिल कुमार सिंह**, उपमहानिदेशक (एनआरएम) भा.कृ.अनु.प. द्वारा
10.25 10.40 बजे	**डा. मंगला राय**, सचिव (डेयर) और महानिदेशक, भा.कृ.अनु.प. का अभिभाषण
10.40 11.40 बजे	सम्माननीय अतिथियों का अभिभाषण **श्री अजीत पवार** जल संसाधन (कृष्णा घाटी सिंचाई निगम को छोड़कर) कमान क्षेत्र विकास एवं जल आपूर्ति तथा स्वच्छता मंत्री, महाराष्ट्र सरकार **श्री दिलीप वलसे पाटील** वित्त एवं योजना मंत्री, महाराष्ट्र सरकार **श्री हर्षवर्धन पाटील** सहकारिता, रोजगार गारंटी स्कीम, सांस्कृतिक मामले एवं संसदीय कार्य मंत्री, महाराष्ट्र सरकार **श्रीमती सुप्रिया सुले** संसद सदस्य (राज्य सभा)
11.40 12.00 बजे	अध्यक्ष, **श्री बालासाहेब थोरात**, कृषि मंत्री, महाराष्ट्र सरकार का अभिभाषण
12.00 12.25 बजे	मुख्य अतिथि माननीय **श्री शरद पवार**, केंद्रीय कृषि, उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्री का अभिभाषण
12.25 12.30 बजे	**डा. एन. बी. पाटील**, प्रधान सचिव (कृषि) कृषि एवं सहकारिता विभाग, महाराष्ट्र सरकार द्वारा धन्यवाद ज्ञापन

Your gracious presence is solicited at the

FOUNDATION STONE LAYING CEREMONY

of the

National Institute of Abiotic Stress Management (ICAR)

by

Shri Sharad Pawar

Hon'ble Union Minister of Agriculture, Consumer Affairs,
Food and Public Distribution, Govt. of India

on

Saturday, February 21, 2009 at 10.00 hrs

Shri Balasaheb Thorat

Agriculture Minister, Govt. of Maharashtra
will preside over the function
in the presence of

Shri Ajit Pawar

Minister, Water Resource (Excluding Krishna Valley Irrigation Corporation),
Command Area Development and Water Supply & Sanitation,
Govt. of Maharashtra

Shri Dilip Valse Patil

Minister, Finance & Planning, Govt. of Maharashtra

Shri Harshwardhan Patil

Minister, Co-operation, Employment Guarantee Scheme,
Cultural Affairs and Parliamentary Affairs, Govt. of Maharashtra

Smt Supriya Sule

Member of Parliament (Rajya Sabha)

Dr. Mangala Rai

Secretary (DARE) & DG, ICAR

Dr. A. K. Singh
DDG (NRM), ICAR, New Delhi

(Programme overleaf)

Foundation Stone Laying Ceremony of National Institute of Abiotic Stress Management

Baramati (Maharashtra)

Programme

Saturday, February 21, 2009

09.45-10.00 hrs	Arrival of Dignitaries
10.00-10.15 hrs	Unveiling of Foundation Stone
10.15-10.25 hrs	Arrival of dignitaries on the dais Welcome by **Dr. A. K. Singh**, DDG (NRM), ICAR
10.25-10.40 hrs	Address by **Dr. Mangala Rai**, Secretary (DARE) & DG, ICAR
10.40-11.40 hrs	Address by Guests of Honour **Shri Ajit Pawar**, Minister, Water Resource (Excluding Krishna Valley Irrigation Corporation), Command Area Development and Water Supply and Sanitation, Govt. of Maharashtra **Shri Dilip Valse Patil**, Minister, Finance & Planning, Govt. of Maharashtra **Shri Harshwardhan Patil**, Minister, Co-operation, Employment Guarantee Scheme, Cultural Affairs and Parliamentary Affairs, Govt. of Maharashtra **Smt Supriya Sule**, Member of Parliament (Rajya Sabha)
11.40-12.00 hrs	Address by the Chairman, **Shri Balasaheb Thorat**, Agriculture Minister, Govt. of Maharashtra
12.00-12.25 hrs	Address by the Chief Guest, **Shri Sharad Pawar**, Hon'ble Union Minister of Agriculture, Consumer Affairs, Food & Public Distribution, Govt. of India
12.25-12.30 hrs	Vote of thanks by **Dr. N. B. Patil**, Principal Secretary (Agriculture), Department of Agril. & Co-operation, Govt. of Maharashtra

Recognizing the importance of influence of climatic change on the already mounting adverse effects of abiotic stresses of climate, water, edaphic factors etc. on various sectors of agriculture, horticulture, livestock, fisheries, birds etc., on 19 January 2009 the Union Cabinet approved the establishment of National Institute of Abiotic Stress Management (NIAM), a deemed-to-be university. The Government of Maharashtra has generously allotted land for the Institute, and farm at Malegaon Khurd (18°09"30.62'N by 74°30"03.08'E MSL570 m) and residential colony at Baramati (18°10"56.27'N by 74°36"04.78'E MSL 580 m) at Maharastra Industrial Development Corporation (MIDC) area in Pune district in the semi-arid tract of the plains of Western Ghats. It is located south east of Pune (120 km) and Mumbai (330 km). The rainfall is 560 mm. Typical rain shadow area of Solapur is 175 km away on east direction. Mostly this area is rainfed and drought prone, representing such kind of abiotic stresses. But adjacent is also Nira canal irrigated area. The industrial area is also nearby. The nearby airport is at Pune. There is an airport under development. In the vicinity it is surrounded by the renowned institutions like NCCS, IITM, IMD, NCL, Agarkar Research Institute, State agricultural universities like MPKV, PDKV, Veterinary University and others, ICAR institutes like NBSSLUP, CIFE, CIRCOT, NRCs on Grapes, Onion and Garlic, Citrus, Pomegranate, College of Agricultural Banking and several others. This is a land of highly revered satgurus (saints) like Gyandev, Tukaram, Shirdi Saibaba, Meherbaba, Tajuddin Baba, Hazarat Babajan, Narayani Maharaj, and others and great warriors like Shivaji Maharaj.

The foundation stone was laid by Shri Sharadchandraji

Pawar, Hon' Minister of Agriculture & Consumer Affairs, Food & Public Distribution, Government of India, at 1030h on 21 February 2009, in South-West portion of Gat 35, Malegaon Khurd, Baramati, Pune District, Maharashtra in the presence of several dignitaries like Shri Bala Saheb Thorat, Agriculture Minister, Shri Ajit Pawar, Minister of Water Resources (excluding Krishana Valley Irrigation Corporation), Command Area Development and Water Supply and Sanitation, Shri Dilip Valse Patil, Finanace and Planning Minister, Shri Harshawardan Patil, Minister of Cooperation, Employment Guarantee Scheme, Cultural Affairs and Parliamentary Affairs of Government of Maharashtra and Smt Supriya Sule, Member of Parliament (Rajya Sabha), Dr Mangala Rai, Secretary (DARE) and Director General (ICAR) and Dr AK Singh, DDG (NRM), several Directors and their staff of Research Institutes from the Indian Council of Agricultural Research, Dr VM Mayande, Dr SD Deshmukh and other Vice-Chancellors of State Agricultural Universities, former Vice-Chancellors, Commissioners, Collector, Sub-divisional Officers of Revenue, Agriculture and other departments of Government of Maharashtra, several Officials from Ministry of Agriculture, Government of India, several Panchayat leaders and officials, local leaders and other public coming from neighbouring places, gathering to about eight thousands costing more than rupees eleven lakhs.

Soil Survey Report

The survey is carried out by the Scientists of National Bureau of Soil survey & Land Use Planning, Nagpur. The site is earmarked for establishing National Institute of Abiotic Stress Management (under Natural Resources Management Division of ICAR) at Malegaon, Tehsil Baramati, District Pune, Maharashtra cover an area of 76.49 ha (18°09'1.1" to 18°09'37.8" N and 74°39'0.1" to 74°30'8.5", computed through GPS, which differs from Google).

Geology

Basalt basic flows are horizontal in deposition, massive, dark gray coloured, fine, jointed, fractured and vesicular zeolitic in nature. Deccan trap consists of laberoderite and bytonite minerals calcic in nature and important sources of trace elements to the soil.

Geomorphology

The site is a basaltic subdued plateau with an elevation ranging from 547 to 565 m) sloping towards south. Geomorphologically, the landscape is divided into summit, side slopes, shoulder slopes and back slopes. The radial drainage in all the directions owing to lesser length of slope leads to severe stony surface cover and gully formation in north-west and north-east of the landscape causing head ward erosion. The ground natural features associated in nose slope parts are gullies wherein sparse scrub/grass cover on weathering front or soft sheet rock with rock-out crops (>40% surface cover) is common. In eastern side, 1/3 rd part is A is excavated for murrum with breakup slopes of convex and concave pattern. The south-east part is under quarry wherein landscape is totally disturbed. The summit and back slopes are associated with 1-3% slope and side slope and shoulder slope upto 5-10%. The terracing (bunding - 5-8 m apart depending upon slope) on summits and back slopes has been modified natural slopes and are planted with Neem, Aonla, Shisham and *Acacia spps*. The site characteristics and soil profiles in the study is presented in Fig.1.

Climate

The study site falls under the scarcity rainfall zone with mild winters and hot summers. Average annual rainfall is 693 mm, receiving mostly during June to September. The mean annual maximum temperature is 30.7°C, mean annual minimum temperature of 29.9°C and mean annual temperature of 27.4°C. The soil moisture regime is ustic and temperature regime is isohyperthermic.

Vegetation

The area is wasteland (upland with scrub). The social forestry department has tried for the plantation of neem, shisham, karanj and aonla in pits (4-7 m apart) prepared through drilling. The survival of these plants is meagre and few plant stands are visible in back slopes off south-west, north-west and north-east (above to quarry's land). The grasses are Haryali (*Cynodon dactylon*), Lavala (*Cyprus rotundus*), Kunda (*Ischemum pidasum*), Tanduja (*Amaranthus polygamus*), Ekdandi (*Tridex procumbens*), Tarwad (*Cassia quariculata*) and *Calatropis spp.*

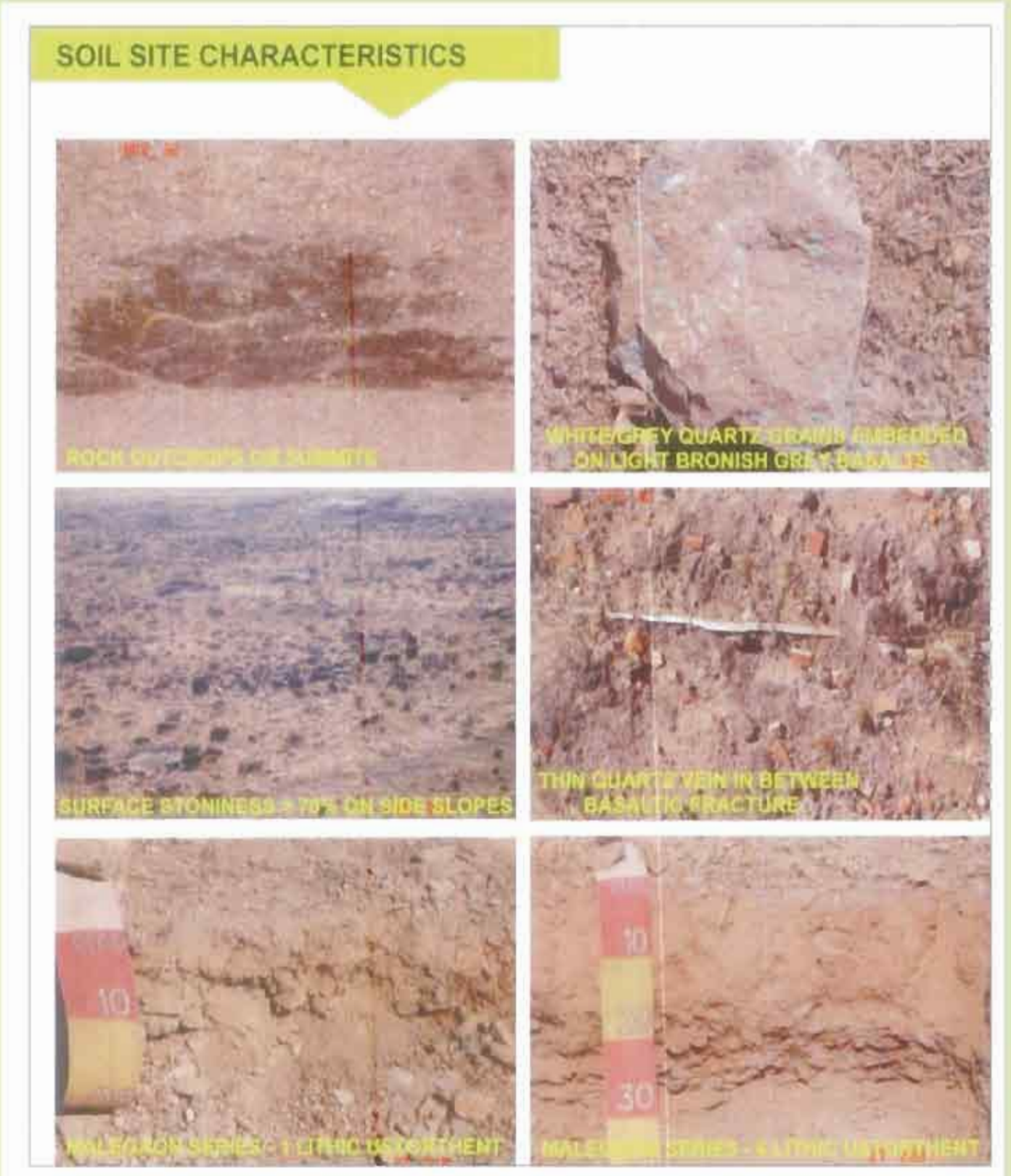

Fig.1. Soil site characteristics

The soil survey was carried out using cadastral map scaled at 1:10000 scale. A total of 106 profiles were studied with field traverse. The density of soil profile observations is 1.39/ha. Six soil series were identified and area was mapped with 12 mapping units defined as phases of soil series. The description extent of mapping units presented in fig.2.

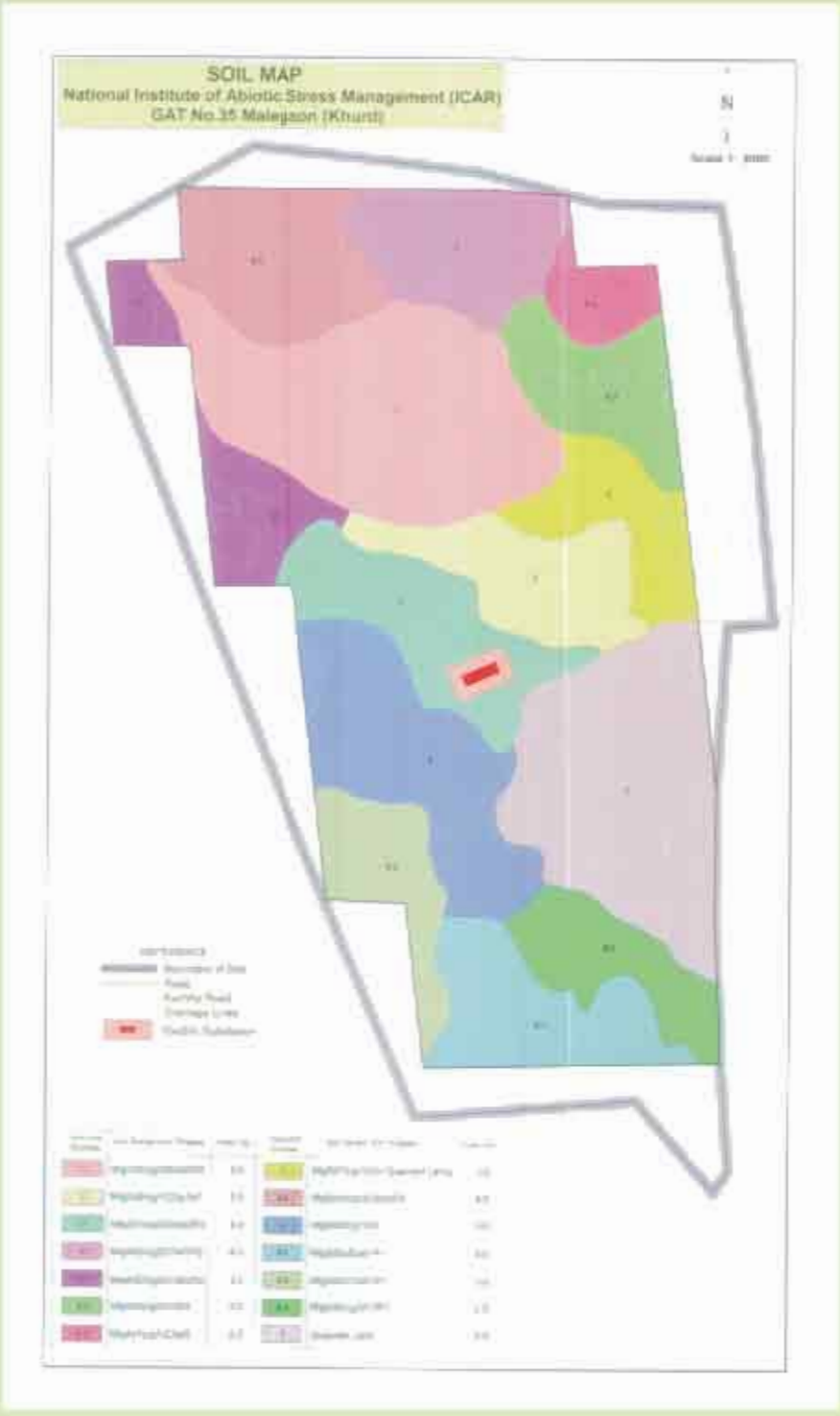

Fig.2. Soil Map

1. **Malegaon Series-1:** [Loamy-skeletal, mixed isohyperthermic (calcareous) Lithic Ustorthents].
Mlg1d2(g2)B3st2R2: Shallow (8-16 cm deep), brown (10YR 4/3 and 10YR 5/3), pale brown to 10YR 6/3) gravelly sandy loam occurring on very gently sloping summit associated with severe erosion, moderately stony and rocky. Soils are underlain by saprolite up to 24 cm and thereafter hard rock

2. **Malegaon Series-2 :** [Loamy-skeletal, mixed isohyperthermic Lithic Ustorthents].
Mlg2d2(g1)D2g1st1: Shallow (8-13 cm deep), reddish brown (5YR 4/3), gravelly sandy clay loam occurring on shoulder slopes (5-10%) but terraced one and associated with slightly gravelly and stony. These soils are underlain by saprolite up to 29 cm and thereafter hard rock.

3. **Malegaon Series-3 :** [Loamy-skeletal, mixed, hyperthermic Lithic Ustorthents].
Mlg3d1(g2)D3st2R3: Very shallow (<7.5 cm deep), pale brown to brown (5YR 5/3,6/3), sandy loam soils occurring on moderately sloping (5-10%). These are severely eroded, moderately stony and associated with severely rock out crops (non-calcareous). These soils are underlain by saprolite up to 15 cm and then hard rock.

4. **Malegaon Series-4:** [Loamy-skeletal, mixed (calcareous) isohyperthermic Lithic Ustorthents].
4.0 Mlg4d2C(g2)C3st1R2 : Shallow, brown (7.5YR 4/3), sandy loam, moderately gravelly, gently sloping (3 to 5%), severely eroded, slightly stony, moderately covered with surface rock out crops.
4.1 Mlg4d2h(g2)C3st2R2: Shallow (11-17 cm), brown (7.5YR 4/3), sandy clay loam, moderately gravelly, gently sloping (3 to 5%), moderately stony, moderately covered with surface rock out crops.
4.2 Mlg4d2C(g3)C3R3: Shallow (9-18 cm), brown (7.5YR 4/3), sandy loam, severely gravely, gently sloping (3 to 5%), strongly covered with surface rock out crops.
4.3 Mlg4d1c(g1)C3st2: Very shallow (<7.5 cm), brown (7.5YR 3/3), sandy loam, slightly gravely, gently sloping (3 to 5%) moderately stony.

5. **Malegaon Series-5:** [Sandy-skeletal (non-calcareous), isohyperthermic Lithic Ustorthents].
5.1 Mlg5d1b(g1): Very shallow (<7.5 cm),, brown (10YR 5/3, 4/3), loamy sand, slightly gravely, quarried land.
5.2 g5dlb(g2) D3St2R3: Very shallow (<7.5 cm), brown (7.5 YR 5/3), loamy sand, moderately gravelly, moderately sloping (5-10%), severely eroded, moderately stony and rocky.

6. **Malegaon Series-6:** [Loamy, mixed (calcareous), isohyperthermic Lithic Ustorthents]
6.0 Mlg6d2h(g1)B2: Shallow (9-20 cm), brown (10YR 5//3), sandy clay loam, slightly gravelly, very gently sloping (1-3%), moderately eroded.
6.1 Mlg5d1b(g1): Very shallow (<7.5 cm), brown (10YR 5/3, 4/3), loamy sand, slightly gravely quarried land.
6.2 Mlg5dlb(g2) D3St2R3: Very shallow (<7.5 cm), brown (7.5 YR 5/3), loamy sand, moderately gravelly, moderately sloping (5-10%), severely eroded, moderately stony and rocky.

7. Quarried land

Climate

The India Meteorology Department, Pune Station wind rose diagram, available for period of 1981 to 1994, from the office Deputy Director-General, Regional Meteorological Department, Mumbai indicates for morning and evening time, that the overall wind direction for the district is from the West to South West, with absolutely no wind from the South and an infinitesimal percentage of wind from the North direction. The predominant winds from the West and South West direction are responsible for the monsoon as they carry moisture-laden clouds from the Arabian Sea. A distinct variation can be seen in the seasonal pattern of the wind frequency. Wind frequency is more during the monsoon season, with percentage of frequency reaching as high as 73% with not much of diurnal variation. During the monsoon, the period of calm is the least of all the seasons. There is moderate amount of wind during the summer months from the West to North West direction up to about 52% with maximum wind during the evening. A period of clam can be felt during the morning hours with high diurnal variations. In winter the frequency of wind is up to about 34% not from any one direction specifically and with a reduced diurnal variation. Pune is declared drought prone district.

The India Meteorology Department, Government of India, has an observatory in Baramati. Average of 48 years of various meteorological parameters is given below. The rainfall is received from early June to early October (South-west Monsoon). The summer showers are received in May. The rainfall distribution is normal. Most of the rainfall received in September-October. In 1974, only 24% of rainfall (minimum) and 183% of rainfall in 1956 (maximum) were the records. Cold season is in November-February and hot period is Feb-early June.

Table 6: Monthly Climatological Parameters of Baramati

Month	Rainfall (mm)	Rainy Days	Max temp (°C)	Min temp (°C)	Wind speed (km/h)	Relative Humidity 0830 h (%)	Relative humidity 1730 hr (%)	Thunder storms (mean no.of days)	Dust storms (mean no. of days)
Jan	3.5	0.2	30.1	13.0	5.8	60	32	0.1	0.1
Feb	0.5	0.1	32.9	14.8	6.8	51	24	0.1	0
Mar	1.8	0.3	36.6	18.7	7.9	42	19	1.1	0.1
Apr	4.2	0.5	38.9	22.2	9.6	45	22	1.1	0.1
May	30.1	2.0	38.9	22.9	12.9	56	28	1.4	0
Jun	75.6	4.9	33.3	22.7	14.9	73	53	1.8	0.1
Jul	56.4	5.0	30.0	22.2	14.4	79	64	0.3	0
Aug	60.4	4.4	29.4	21.5	14.2	80	65	0.3	0
Sep	161.7	7.9	30.8	21.0	10.5	80	60	1.4	0
Oct	91.7	4.7	32.3	20.0	6.9	69	43	0.5	0
Nov	25.8	1.6	30.8	16.3	6.3	63	40	0.1	0
Dec	4.8	0.4	29.4	13.6	5.8	63	37	0	0
Total	516.5	32.0	32.8	19.1	9.7	63	41	8.5	0.4

(Average of 48 years; Climate of Maharashtra, Meteorology Department, Government of India, 2005)

For Baramati, the rainfall data is also available on Internet viz., FORECA and mahaagri.com. Two nearest agro-meteorological stations are at Pune (Agricultural College) in north-west direction, and Padegaon (Research station) under MPKV, Rahuri, in south-west directions, which are about 100 and 40 km away from Baramati, respectively. The data was provided by the All India coordinated Project on Agrometeorology, Central Research Institute for Dryland Agriculture, Hyderabad. The data is full in case of Pune 33 years, 1970-2002), incomplete at few of the cells and period of data is given in table-7. The month-wise average rainfall is as follows:

Table 7: Comparison of Baramati Rainfall from Different Sources & Neighbouring Places

Month	Baramati (FORECA)	Baramati (mahaagri.com) 1998-2009		Padegaon (40 km), 1971-1995		Pune (100 km), 1977-2002	
	Average (mm)	Average (mm)	SD	Average (mm)	SD	Average (mm)	SD
Jan	1.7	0.8 (9)	2.33	1.5 (10)	3.77	1.1	3.4
Feb	0.4	0(9)	0.0	0(-)	0.0	1.6	5.6
Mar	0.4	0(9)	0.0	1.3(14)	2.88	1.6	3.3
Apr	7.3	0(9)	0.0	5.6(15)	8.00	10.8	15.1
May	19.7	22.7(9)	34.38	35.7(15)	31.33	33.5	28.9
Jun	129.4	103.2(12)	71.89	119.8(14)	95.66	156.4	111.3
Jul	128.0	62.9 (12)	59.18	63.7(14)	42.80	163.8	80.8
Aug	91.7	70.0(12)	57.61	52.6(15)	40.17	117.7	68.4
Sep	98.9	209.8 (12)	118.45	113.8(15)	85.27	134.7	95.9
Oct	63.1	97.6(12)	102.2	97.2(14)	90.93	84.8	78.0
Nov	15.2	7.8(9)	14.0	15.9(15)	33.8	25.5	40.3
Dec	6.0	0 (12)	0.0	4.4(11)	24.13	21.3	85.4
Total	561.8	574.8		510.9		752.8	

(SD Standard Deviation ; FORECA is from Internet, period not available; figures in parentheses are number of observations available)

A perusal of the monthly rainfall data shows that at Padegaon and Baramati (mahaagri.com), Baramati receives more rainfall. Summer rains occurred in May. Most of the rainfall is received from June to October. July-August is a relatively a dry period with low rainfall occurrence while September is a wet one. Thus the rainfall distribution is bi-modal. Baramati (FORECA) and Baramati of IMD are uni-modal. A bimodal depiction is seen from limited mahaagri data. Thus there is a variation between long term data and short term data, depicting the rainfall distribution of normal against bimodal. It is also possible that distribution is changing in recent times. However it requires further statistical evaluation before any inferences are drawn from indications. Other parameters aer more or less of the same pattern as can be seen in the table-7 as above. Therefore it can be perceived that Southwest monsoon rains are received from early June to early October in Baramati. The farmers' feeling of dry months during the season of July August calls for attention in view of climate change.

Seminars/Conferences/Workshops/ Meetings

Seminar/Conference/Workshop/Invited Lectures/ Training Programs

Dr. KPR Vittal, Director and Sh MB Khubdikar, Administrative Officer attended 'Interactive Workshop on Administrative & Finance' at Hyderabad from 8-13 September 2009

Dr. KPR Vittal, Director, attended National Symposium on Application of Bio-Nanotechnology in Agricultural and Animal Sciences for Food Security at National Dairy Research Institute, Karnal on 7-8 December 2009

Dr. SV Ghadge, Sr. Scientist, attended farmers day programme on 'Sitafal Parishad' at Regional Agricultural Research Station (MPKV), Solapur on 13 December 2009

Dr. UK Maurya, Technical Officer, attended 'Platinum Jubilee of ISSS & National Seminar of Indian Society of Soil Science (ISSS) at IARI, New Delhi from 21-24 December, 2009 and presented the paper on "Clay Pedofeatures as Indicator of Neotectonic Stress in the Soils of Indo-Gangetic Plain."

Dr. SV Ghadge, Sr. Scientist, attended State level seminar on 'Soil Resource Management for Sustainable Soil Health and Food Security' at PDKV Akola, on 2 January 2010

Dr. UK Maurya, Technical Officer, attended the National Conference on 'Groundwater Resource Development and Management in Hard Rock' at Pune University, Pune during 12-13 February 2010

Dr. KPR Vittal, Director, attended Planning Commission Meeting -cum- Workshop on 'Interface on Optimal Land Use and Water Management' at NBSS & LUP, ICAR, Nagpur on 22 February 2010

Dr. KPR Vittal, Director, Chief Guest at Farmers' day at Regional Agricultural Research Station (MPKV), Solapur on 13 November 2009

Dr. KPR Vittal, Director, delivered 'RS Murthy Memorial Lecture' on 'Is Soil Abiotic Stress an Unbeatable ????' at ISSS-ANGRAU, Hyderabad on 6 October 2010

Dr. KPR Vittal, Director, attended International Symposium on Challenges and Prospects of Arid Zone and delivered Keynote address on 'Management of Soil Abiotic Stresses' at Jodhpur on 27 November 2009

Dr. KPR Vittal, Director, delivered keynote address on 'Enhancing nutrient and water use efficiency in rainfed agriculture' during Platinum Jubilee of ISSS & National Seminar of Indian society of science (ISSS) at IARI, New Delhi on 23 December 2009

Dr. KPR Vittal, Director, inaugurated State Level Seminar on 'Soil Resource Management for Sustainable Soil Health and Food Security' and delivered keynote address at PDKV, Akola on 2 January 2010

Dr. KPR Vittal, Director, delivered Plenary Lecture on 'Creation of Contingency Plan in Rainfed Agriculture' in Plenary Session of Agrometrology towards better adversaries for serving end users at IMD, Pune on 5 February 2010

Dr. UK Maurya, Technical Officer attended the ICAR 'Zonal Technology Management and Business Planning and Development Meeting -cum-Workshops 2009-10' at CICR, Nagpur from 5-6 March 2010

Distinguished Visitors

Shri Rajiv Mehrishi, IAS, Additional Secretary (DARE) and Secretary (ICAR), Krishi Bhawan, New Delhi.

Shri SP Manchanda, Executive Engineer, Indian Council of Agricultural Research, New Delhi.

Dr AK Gogoi, Assistant Director General (Agronomy), Indian Council of Agricultural Research, New Delhi.

Shri VP Kothiyal, Director (Works), Indian Council of Agricultural Research, Krishi Anusandhan Bhavan (KAB - II), Pusa, New Delhi.

Shri Rajendra Pawar, Chairman, Agricultural Development Trust, Shardanagar, Baramati.

Smt. Supriya Sule, Hon'ble Member of Parliament, Baramati.

Dr SS Magar, Ex. Vice Chancellor, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli, Ratnagiri.

Dr Kadam, Chief Scientist, All India Coordinated Research project for Dryland Agriculture, Solapur.

..... and few others.

Budget

The EFC approved and sanctioned budget for various items over years in XI Plan (Table-8), receipts and payment account for the year ended 31st March 2010 and sanctioned budget utilization in 2009-10 (Table-9) and Receipt & Payments (Table-10) are presented. The institute was approved in 2008.

Table 8: Year-wise & Head-wise breakup of sanctioned budget in XI Plan

Rs. In lakhs

Head	2008-09	2009-10	2010-11	2011-12	Total
A Recurring					
Pay & Allowances and Wages	209.00	250.00	350.00	400.00	1209.00
Traveling Allowances	10.00	10.00	20.00	20.00	60.00
HRD	7.00	8.00	14.00	21.00	50.00
Contingencies	312.00	330.00	200.00	252.50	1094.50
Sub-Total	538.00	598.00	584.00	693.50	2413.50
B Non- Recurring					
Equipment	1019.50	370.00	400.00	400.00	2189.00
Furniture and fixtures	60.00	40.00	-	-	100.00
Vehicles	30.00	26.00	10.00	-	66.00
Information Technology	60.00	20.00	20.00	20.00	120.00
Library	50.00	20.00	15.00	15.00	100.00
Works	814.00	527.00	510.00	510.00	2361.00
Sub-Total	2033.50	1003.00	955.00	945.00	4936.50
Total	2571.50	1601.00	1539.00	1638.00	7350.00

Table 9: Budget Utilization in 2009-10

Rs. In lakhs

Subhead	Funds Allotted 2009-10	Expenditure Incurred 2009-10
	Plan	Plan
Estt. Charges	20.70	20.70
Travelling Allowance	4.31	4.31
Other Charges	39.04	39.04
Works	741.95	741.95
Total	806.00	806.00

Table 18: Receipts & Payment Account for the Financial Year 31 March 2010

Receipt	2009-10	Payments	2009-10
I. Opening balances:		I. Expenses	
a) Cash in hand	0.00	a) Establishment	2070083.00
b) Bank balances	0.00	b) Administrative	2826691.00
>> in Current Accounts		c) Research	0.00
>> in Deposit Accounts		II. Payments against funds for various	
projects	0.00		
>> in Savings Accounts		III. Investments and Deposits	0.00
II. Grants Received from Govt. of India		a) Out of Earmarked funds	
Plan	100000000.00	b) Out of own funds.	
Non-Plan		IV. Expenditure on Fixed Assets	
A.P. Cess		and capital work-in-progress	
III. Donations and Contribution	0.00	a) Purchase of Fixed Assets	1508226.00
IV. Income on Investments from	0.00	b) Expenditure on Capital	74195000.00
a) Earmarked Funds		Work-in-progress	
b) Own Funds		V. Repayment of un- utilized Grants/	19400000.00
V. Interest Received		Loans/Borrowings	
a) on Bank Deposits	929776.00	VI. Deposits and Advances	1465726.00
b) Loans, Advances		VII. Other payments	0.00
VI. Deposits and Advances	1473210.00	VIII. Closing Balances	
VII. Other Income	0.00	a) Cash in hand	5000.00
VIII. Loans and Borrowings	0.00	b) Bank Balances	
IX. Misc. Receipts	8800.00	· In Current Accounts	941060.00
		· in Deposit Accounts	
		· In Savings Account	
		c) In transit	0.00
Total	102411786.00	Total	102411786.00

Personnel

Dr. KPR Vittal
Director
Joining Date :17.08.2009
Email : director@niam.res.in

Dr. AK Sharma
Documentation Officer (T-7)
Joining Date : 25.01.2010
Email : do@niam.res.in

Mr. MB Khubalkar
Administrative Officer
Joining Date : 19.08.2009
Email : ao@niam.res.in

Vacant,
Civil (T-3)
-
-

Dr. UK Mourya
Technical Officer (T-6)
Joining Date : 25.08.2009
Email : ukm@niam.res.in

Vacant,
Electrical (T-3)
-
-

Mr. AK Gangwani
Finance & Accounts Officer
Joining Date : 09.09.2009
Email : fao@niam.res.in

Vacant,
Computer (T-3)
-
-

Dr. SV Ghadge
Sr. Scientist
(Farm Machinery & Power)
Joining Date : 05.10.2009
Email : svg@niam.res.in

Vacant,
Field Assistant (T-1)
-
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Except Director all staff are on redeployment/transfer with posts from other Institutes (CIRCOT, Mumbai, NBSSLUP, Nagpur, IARI, New Delhi, ICAR NEH Complex, Barapani, and IISS, Bhopal, respectively) and vacant are from ADRP