

**IBBN**
INDIA BIOCHAR AND
BIORESOURCES NETWORK



An update of activities between Dec 2021 to May 2022



**Revitalising
Rainfed Agriculture**
The RRA Network

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1. Introduction

With support from GIZ, the proposal from RRAN to create a national-level impact on Biochar and Bioresources in India took a formal organizational form as IBBN, the India Biochar and Bioresources Network in February 2022. IBBN is the first of its kind network at the national level for the convergence of practice, science, and policies on sustainable use¹ of farm residues and biomass to improve soil health and carbon sequestration in India.

IBBN will achieve these goals through:

- I. Facilitating a meaningful collaboration between science, farming communities, industry, government, and non-governmental organizations.
- II. Build accessible knowledge systems and demonstration models on ecological repurposing of biomass Bioresources
- III. Innovation across the value chain of Biochar and Bioresources
- IV. Developing policy incentives, quality standards, and demand diversity
- V. Membership, consultancy and strategic collaborations with funding communities for the sustenance of the network

2. First Phase of IBBN

a. Organisational building work and the creation of four evidence-building initiatives

a.1 The secretariat

The initiative created and capacitated a functional secretariat with organisational and technical skills, and program targets. The identity of the network including the name and the objectives were chosen through active deliberation between stakeholders to best serve the objectives of the national entity. Within a short period, the IBBN has been able to set up a secretariat under the leadership of Kshithij Urs, who has extensive leadership experience in the environment, sustainable agriculture and policy domains. The secretariat has been at the core of building the national network in its formative times.

a.2 Formation of the national advisory board

A committee of nine experts with extensive experience in related fields have been mobilised at the national level as an advisory board to the network. Their suggestions on the focus, approach and the strategies have shaped the foundational aspects of IBBN. The members include:

¹ IBBN will not promote unsustainable biomass harvesting, deforestation or compete with biomass used for other useful purposes like cattle fodder.

	Name	Occupation
1	Dr. B. Venkateswarlu	Former Vice-Chancellor VN Marathwada Agricultural University, Parbhani Ex Director, ICAR-CRIDA, Hyderabad
2	Dr. Priyadarshini Karve	Director, Samuchit Enviro Tech, Pune Entrepreneur
3	Dr. Sai Bhaskar Reddy Nakka	Director, The Earth Center, Council for Green Revolution (CGR), Hyderabad,
4	Dr. Rajendra Hegde	Director, National Bureau of Soil Survey and Land use pattern, Bangalore
5	Dr. A.K Biswas	Head of the Department, Soil fertility, Indian institute of Soil Science, Bhopal.
6	Piyush Manush	Conservationist, Tamil Nadu
7	Aruna Rangachar	IFHD, Bangalore
8	Dr. Purakayastha	Principal Scientist, ICAR
9	Ms. Chukki Nanjundaswamy	Senior Leader, Farmers' network Head, Amrutha Bhoomi

a.3 Orientation programs for founding members

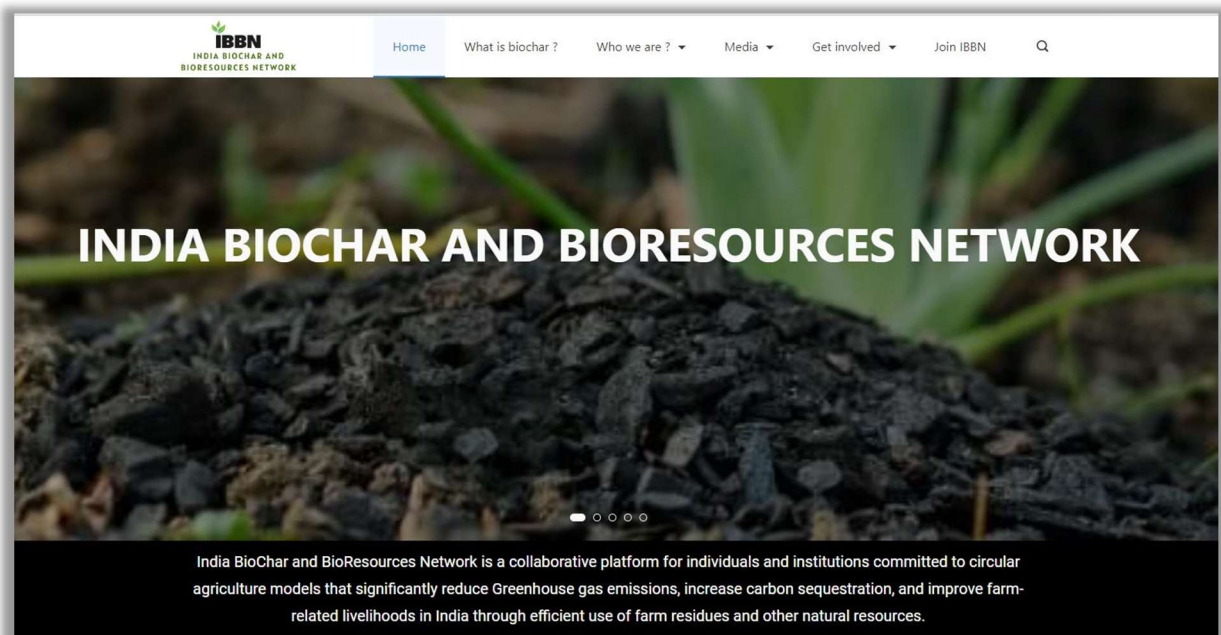
The secretariat facilitated two orientation programs for all the founding members of the network. The first meeting brought the members together and created an opportunity for experts from various states and institutions to be introduced to each other and got their commitment to advice IBBN in furthering its overall objectives. Appropriate suggestions made by the members, mainly around the need for a formal network formation in India, and the suggestion to focus our activities on improving the lives and livelihood of farmers, have been the preambulatory foundation for the network.

The second meeting of the advisory board was with experts from the German Biochar Association. Dr. Sussane Veser, the Director of the Association led the discussion on the history of their association, their work on Biochar at the interface between science, practice and policy in Europe. The discussion also explored possible synergies between IBBN and the German Biochar Association and collective policy formulation at the international level.

A.4 Creation of communication credentials for IBBN

IBBN has its own website with a fully developed landing page and data for the other pages in its final stages. Emails have been created for the members of the small secretariat. A community primer has been created in Kannada and has been distributed among farmers and organizations in Karnataka. The primer is an introductory booklet to disseminate simple technology for Biochar production and improve soil health management.

The website : www.ibbn.org.in - Besides creating online presence, the IBBN website has been planned for information exchange, partnership development, improve credibility, have analytical tools for insights, and to provide growth opportunity for IBBN.



The landing page of the IBBN website

b. Identifying foundational stakeholders and ensuring their commitment to the cause of the network

Identified and initiated introductory communication with organisations, academic institutions, corporate companies, and practitioners of Biochar across the country This is besides the members of the advisory group. Direct channels of communication and a few physical meetings have been held with some of the important stakeholders including:

1. ICRAF
2. Organisation of Development Action and Maintenance
3. WOTR
4. FES
5. BIAF
6. Coop Forest
7. Local farmers
8. Farm2Energy

Active networking processes have also been initiated with top universities in India. IBBN has established linkages with JNU, IISS, IIT-D, and IISc-B. These institutes are known for their immense contribution to the development of science in the country and their presence as partners of IBBN will be very useful.

c. Integrate the Biochar agenda in the widespread organic/natural farming movement and the rapid policy-driven FPO program in the country

Despite being in its initial phase, the India Biochar and Bioresources Network has made inroads in the Biochar landscape in India through active discussions with academics and researchers in esteemed universities and research institutions in the country. There have also been discussions with national advisory authority and state government departments in Karnataka and Odisha. As a network originating from Revitalising Rainfed Authority of India, there is already a wide linkage with CSOs, networks, and government functionaries in Andhra Pradesh, Himachal Pradesh, Karnataka, Maharashtra, Odisha, and Telangana. Particular efforts have been made to newly introduce Biochar related agendas in the following entities:

1. NRAA – The National Rainfed Agriculture Authority of India. As a department of ministry for agriculture and farmer welfare, NRAA works to make rainfed agriculture an economically viable enterprise for improving livelihood and welfare of farming community, by adopting appropriate strategies compatible with agro-ecology, agro-biodiversity and sustainability.
2. WASSAN – is an civil society organisation in Hyderabad which works to entrench participatory processes through network approach that strengthen Natural Resources Management (NRM) practices to secure livelihoods of deprived communities in drought prone areas. It is also known to articulate voices and needs of the people and agro-ecologies at margins, in the marginalized rainfed geographies, into public systems and policies to catalyse action at scale.
3. ORAM – The Odisha Rainfed Agriculture Mission is a state government initiative to improve area productivity by 10% in social and economic indices of farmers in rainfed areas compared to baseline data of 2021. IBBN sees a great potential to integrate its objectives in ORAM.
4. RRAN – is a network of civil society organisations, researchers, practitioners and policy makers with the vision to establish productive and resilient rainfed agriculture in India. It is the largest such network in the country with programs spread over rainfed areas and policy spaces in eight states an thematic groups in India.
5. NCF - The National Coalition for Natural Farming is a collaborative platform for accelerating the spread of agroecology-based farming practices in its multiple variants, improving on existing practices, and collaborating for policy discourse. IBBN's agenda fits well with the aims and objectives of NCF

6. State governments – Initial discussions have been held with the governments of Odisha and Karnataka toward closer collaboration between IBBN and state governments. We will be working at levels of practice and policy with state governments.
7. Indian Institute of Soil Survey, Bhopal
8. Indian Council for Agricultural Research, Delhi
9. Jawaharlal Nehru University, Delhi
10. National bureau of soil survey and land use planning, Bangalore
11. Krishi Vignyan Kendra, Karnataka

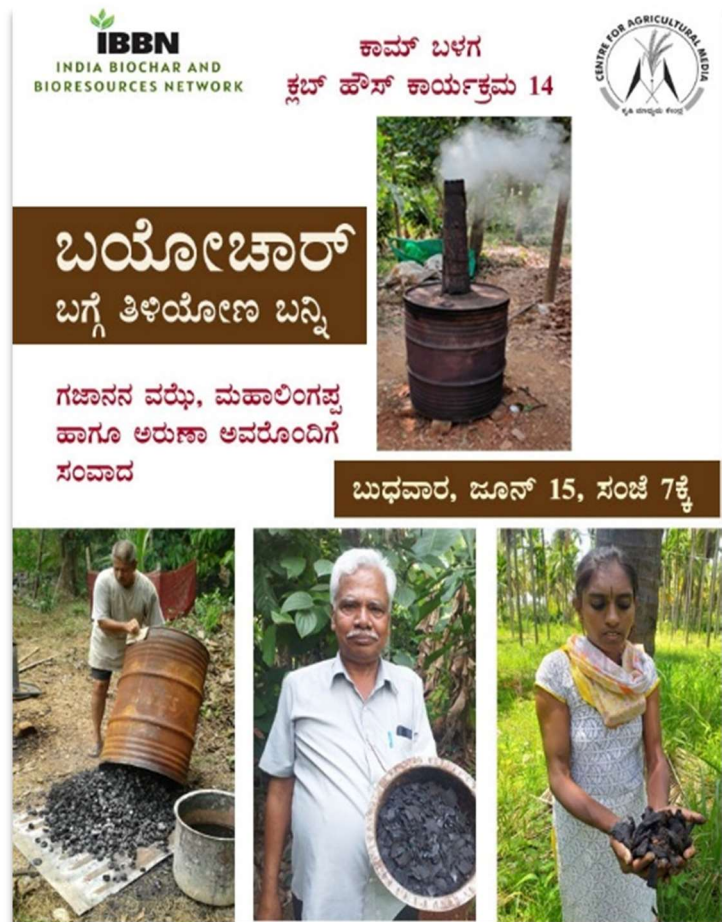
d. A study on the history, protagonists and research of Biochar in India.

IBBN has published two reports on Biochar in India. The first is titled **Biochar application in agriculture, its production and scalability** and is based on secondary data review and a meta-analysis of Biochar work in India and elsewhere. The report has been attached as a separate document.

There has also been an initial review of the existing body of work on research and practice of Biochar in India. Overall, the quality of work on the issue seems limited.

While practitioners in the form of CSOs and farmers have been active for over two decades, they have been few and far between. Research studies and peer reviewed reports started about 12 to 15 years ago.

There are wide variations in research methodologies, interpretations and recommendations. Contradicting findings, the lack of consistent follow through and limited small sample sizes



make research studies unreliable. There are only a handful of articles that appear professional.

The second report is a case study of Biochar practitioners in rainfed districts of Karnataka. The report in Kannada documents farmers' opinions on how they were introduced to Biochar, their production and application practices, impact on agriculture, challenges, and on their initiative to involve other farmers.

The network has also created a data base of the most recent, peer-reviewed research papers on Biochar from around the world. An online mechanism is being finalised for it to be shared across the various stakeholders of the network.

e. Inaugural webinar of IBBN

Meeting ID: 896 6539 0036
Passcode: 925283
India Biochar
Bioresource Network

IBBN
India BioChar and
BioResources Network

Inaugural workshop
**SOIL HEALTH BENEFITS OF BIOCHAR
AND ITS POLICY OPPORTUNITIES**

Presentation 1: Dr. A.K Biswas, IISS
Response: Dr. Bindu Mohanty, RRAN
Presentation 2: Dr. Aqeel Rizvi, ICRAF
Response: Dr. Priyadarshini, Samuchit Tech
Presentation 3: Navin Horo, GIZ
Host: Dr. Kshithij Urs, IBBN

30 MAY, 2022 . 11AM TO 1 PM

Revitalising
Rainfed Agriculture
The RRA Network

german
cooperation
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SNEHAKUNJA

The inaugural webinar was held on 30th May. More than 125 individuals and members of organisations participated in the event which went live on Youtube. The related work. A physical meeting will also be held for RRAN partners in Karnataka.

The latter has also planned to happen in May, 2022. While the online meeting will have a national focus, identifying possible futures for best impact at the national and global scale, the one in Bangalore will be about strengthening policy and practice at the state level.

The Inaugural webinar poster

f. Participation in the GIZ inter-state conference on Biochar in Aurangabad

The IBBN secretariat participated in a multi-state conference organised by GIZ in Aurangabad. Dr. Kshithij Urs made a presentation on the need for a national network on Biochar and

Bioresources. The presentation was widely appreciated by the participants for the contextual clarity of IBBN. It was also a good opportunity to network and identify collaborative possibilities with each of the attendees.



g. State-level meeting of the government, farmers, scientists, and civil society organizations in Karnataka

A day-long meeting was held in Bangalore on 28th May, with over 70 organizations in Karnataka discussing the various strategies to improve the incomes of farmers. There were five-panel discussions with three experts in each of these panels. The report of the event has been provided as a separate document.



More than 70 experienced organisations participated in the state level meeting of IBBN in Karnataka



A PLANNING WORKSHOP

IMPROVED LIVELIHOODS IN RAINFED AREAS THROUGH SUSTAINABLE AGRICULTURE



10:30 am to 4 pm

**28 th May 2022,
Saturday**

**JP Hall, Gandhi Bhavan,
Bengaluru**

Discussion panels

- Situation of rainfed land, and farmers in Karnataka
- Local innovations in rainfed areas
- Role of the Panchayats, farmer producer organizations, and extensions services in improving Rainfed agriculture
- Interventions by Civil Society organizations



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Poster of the State level event with panel topics

Time	Topic	Events
10:30 to 11:00	Inaugural Event	
	<i>Welcome to participants and guests</i>	<i>Srinivasu, Soil Trust</i>
	<i>Inauguration – Watering the plant</i>	
	<i>Context setting</i>	<i>Dr. Kshithij Urs, RRAN/IBBN</i>
	<i>Inaugural address</i>	<i>Dr. Ashok Dalawai, IAS, CEO of NRAA, Gol</i> <i>K T Gangadhar, Farmer Leader</i>
11:00 to 11:45	Panel 1 Role of FPOs and bettering collaboration with CSO in rainfed areas	<u>Speakers</u> Dr.Ashok Alur, Director, Centre for FPO excellence, Aruna, IFHD
11:45 to 12:00	Tea Break	
12:00 to 12:45	Panel 2 Role of government institutes, research institutes, and Panchayats in the Rainfed area	<u>Speakers</u> Rajashekar Basanayak, KVK Kalburgi, MVN Rao, Grama Vikas, Kolara Followed by Discussion
12:45 to 1:30	Panel 3 Innovations in rainfed area	<u>Speakers</u> - Akkadi Saalu – Prabhakar - Biochar – Dr. Anil Kumar, KVK Kolara - Rainfed Paddy – Syed Ghani Khan
1:30 to 2:15	Lunch Break	
2:15 to 3:00	Panel 4 Interventions and challenges of Civil Society Organization	- Tribal Innovation – Dr. Siddappa, ATREE (Online) - Harish, Green Foundation - Sriranga, FES
3:00 to 4:30	Planning and Way Forward	Dr. Kshithij Urs and Srinivasu

h. Field schools on Biochar and Bioresources

Initial steps have been taken on field schools on Biochar and Bioresources in the districts of Kolar, Uttar Kannada and Ramanagara in the South Indian state of Karnataka. The training program will be based on a peer-to-peer approach of farmers training other farmers and helping them produce and effectively use Biochar and manage Bioresources in their farms based on the principles of circularity in agriculture. Ten drum-based Biochar furnaces and one improvised drum furnace have been installed in the three districts. Training programs have already started in Uttar Kannada and Kolar. More than 100 farmers have participated in the training programs so far.



IFPO leaders being trained in mechanised furnace in IBBN field school in Uttar Kannada



The cooling phase of the drum Biochar furnace in an IBBN field school



IBBN has developed an easy way of fabricating Biochar furnaces

i. Mapping the Donor ecosystem for Biochar and Bioresources work in India

The IPCC report 'Mitigation of Climate Change' provides 'robust evidence'² that Biochar has significant mitigation potential through CDR (Carbon Dioxide Removal) and 25 emissions reduction, and can also improve soil properties, enhancing productivity and resilience to climate change. In the context of Bioresources, the report mentions soil carbon management in croplands and grasslands, agroforestry, and Biochar as important mitigation activities in the Agriculture sector.

The IPCC backing of Biochar and Bioresources as clear CDR strategies up has been picked up by the global funding community including Bilateral agencies, philanthropies and UN agencies for project funding to promote multiple use and adoption of Biochar in India – Agriculture, water treatment, carbon trading, carbon markets as an impetus for industrial scale production, and private investment. The network has started exploring the donor landscape in these perspectives and an initial communication with UNIDO is due.

IBBN has also identified the following international organisations and their existing projects that are similar to IBBN. All these organisations will be approached for strategic partnerships for initiatives in India.

1. Carbon Capture and Storage Fund (CCSF)
2. Bill and Melinda Gates foundation funds the climate foundation
3. European union
4. Bloomberg Philanthropies
5. Climate Transformation fund
6. Woka Foundation

On IBBN developing its consultancy services, the following organisations seem to offer economic models that can be useful. However, IBBN's focus is limited to biomass conversion and deep decarbonisation in the agriculture sector.

1. International Biochar initiative
2. GECA Consulting

In the meanwhile, the network has identified and initiated introductory communication with organisations, academic institutions, corporate companies, and practitioners of Biochar across the country. This is besides the members of the advisory group, and include:

1. FICCI – Federation of Indian Chambers of Commerce and Industries
2. Organisation of Development Action and Maintenance
3. CARE India

² [IPCC AR6 WGI III FinalDraft FullReport.pdf](#)

4. ActionAid
5. Coop Forest
6. JNU

3. Plans for the Second phase of IBBN

1. Formalising the institutional framework of IBBN

- 1.1 Complete the setting up of a fully functional and dynamic secretariat with qualified staff members covering all the important functions of IBBN of demonstrate Biochar use, and develop policy incentives, quality standards, and market diversity.
- 1.2 Create a repertoire of categorised information across the whole value chain of Biochar and Bioresources under one roof to provide clear, non-biased, credible information to stakeholders. Organisational relationships will be established with academic institutions, CSOs and governments to make the updated information available through IBBN.
- 1.3 Membership base with over 200 indian organisations and at least 15 global entities in the country within the first year of IBBN's operation.
- 1.4 Create a communications platform for structured exchange of information, and cross-fertilization of learning, experiences, technology, and innovations between various stakeholders, with the primary objective of making steady progress on the meeting the objectives of the network. IBBN will organise conferences, consultations, local meetings and online discussions that are issues driven and agenda setting.
- 1.5 Develop a training vertical in the network with experts, both internal and external, whose expertise can be deployed for maximum impact in the knowledge creation and adoption of Biochar and Bioresources as vital parts in India's ecology and economy.

2. Evidence building and strengthening application and adoption practices through community projects in 6 states in the country

- 2.1 Build on existing inroads to establish field networks of IBBN in Karnataka, Odisha, Andhra Pradesh, Telangana, Maharashtra and Madhya Pradesh in various agro climatic zones.
- 2.2 Comprehensive orientation to GIZ Pro-Soil and RRAN activities in the above states to identify the level of intervention, existing networks, needs of local organisations, and opportunities for IBBN to roll out transformative activities for depth and scale in each of the six states.

2.3 Identify potential districts with sustainable feedstock supply based on current agricultural practices.

2.4 Analysis of state policies for potential complementary with IBBN's agenda, and for pro-soil advocacy in respective states.

2.5 Creation of learning spaces centered around practicing farmers in at least two districts in each of the six states.

2.6 Activate purposeful networking between farmers, FPOs, extension offices of agriculture, horticulture and sericulture departments, research institutes and policy makers

3. Contribute to policy shifts to accommodate Biochar and Bioresources within the government plans to achieve sustainable agriculture and climate change goals in the country

3.1 Establish a strategic collaboration between Indian Institute of Social Science, National Law School of India University, RRAN, ICRAF and GIZ for policy based conferences and advocacy with state and central governments.

3.2 An academic exercise to analyse the opportunities and gaps in the India policy ecosystem on Biochar and Bioresources.

3.3 Compilation of progressive laws from other countries, especially but not restricted to the Global South, for comparison and adoption.

3.4 Focus both on state policies in the six operational states as well as central government policies. Specific focus at the national level will be on the creation of Biochar standards / protocols while state governments will be facilitated to enact policies with an end to end view of the scientific, ecological, social and business aspects of Biochar and Bioresources.

3.5 Towards this, IBBN will roll out policy campaigns in each of the six states and at the national level. The media, the scientific community as well as farming collectives will be active participants of the policy campaign.

4. IBBN will promote strategic, multidisciplinary research to gain insights into the scientific and sociological aspects of Biochar and Bioresources in India

4.1 Forge formal collaborations with scientific and social sciences communities selected for their scope of influence, academic rigour and interest in the IBBN agenda.

4.2 Create simple communication materials like posters, primers and handbills from existing research literature for the sake of education and to influence interest and adoption of Biochar and Bioresources in India.

4.3 Commission strategic research, both collaborative and internal, to promote practice, drive further enquiry and advocacy.

4.4 Use the findings of the research to popularise the issues taken up by the network through focussed media coverage, journal publications, issue based conferences and policy briefs.

5. Establish strategic partnerships with bilateral agencies and other interest groups to ensure sustainability of the network

1.1 Keep Bilateral agencies and interest groups consistently informed about IBBN's work through monthly newsletter, event invitations and communication with concerned individuals in the selected agencies.

1.2 Explore collaborative work with agencies, initially on partnering around events, and moving toward part support for IBBN programs

1.3 Strengthen global networking and make inroads into more and more countries through specific bilateral agencies and interest groups to meet the objectives of IBBN.