

# **Environics Trust**

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# ANNUAL REPORT 2021-22

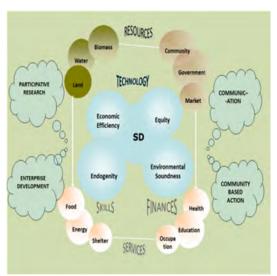
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## CONCEPTUAL UNDERPINNINGS AND MISSION OF ENVIRONICS

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Stepping into a new millennium and having gone past two decades, browsing back for repair or reviving natural systems already damaged is not a matter of choice anymore. It is now common ground to perceive limits: limits of development, resource availability, environmental stability, and economic



Development as it has been practiced over the past, particularly in the final centuries of the last millennium. To respond to this complex task, humankind has evolved newer concepts and paradigms and organised people and resources to form institutions.

The mission of the Environics Trust is to evolve innovative solutions to the problems of community development. Environics Trust reaches out to mountain, mining, marginalized and coastal communities. Each community responds to the diversity and complexity of specific ecosystems and social environments. Environics implies the study of the influence of the environment on human behaviour. Environics Trust interprets it more comprehensively as the mutual influences of environment and social behaviour and attempts to explore this critical area through its programmes focused on communities.

The World Commission on Environment and Development

defined Sustainable Development as that which meets the needs and aspirations of the current generation without comprising the ability to meet those of future generations. This is an approach that ensures that the process takes environmental considerations into account, not just the economic aspects of development or even the wider perspective put forward by the UNESCO.

#### **OBJECTIVES**

- To conduct research and development on environmental issues and human behavioural aspects;
- To implement programmes for community development;
- To promote art and culture, innovate and implement technical and institutional designs for an integrated development of the society;
- To assist, guide local governments, state and central government and international agencies in their development efforts;
- To provide assistance to communities to redress injustices and uphold their rights;
- To diffuse useful, educational, literacy, social, academic, professional and other knowledge;
- To apply results from scientific research for protecting local and global environment;
- To promote Environics as a discipline converging various subjects related to environmental sciences and human behaviour.

In the last decade a perceptible shift has occurred globally, with the reversing of natural resources destruction and conserving a healthy environment have become explicit objectives of development. It is founded in the belief that development must not come at the expense of the life-support systems of other groups, or later generations, nor threaten the survival of other species.

Over the years, Environics Trust has evolved a pragmatic model for sustainable development. Sustainable Development is defined as the 'set of processes that enables the local and global systems to be in ecological harmony'. The four non-orthogonal attributes of sustainable development are:

- 1. Equity and Justice
- 2. Environmental Soundness
- 3. Endogeneity or Self Reliance
- 4. Economic Efficiency.

Societies should identify, evolve processes and implement programmes that concurrently address these four attributes at whatever levels and scales the intervention takes place. In practical terms, an understanding of the existing biophysical and psychocultural systems to establish new paradigms and identify specific efforts that are necessary.

The basic biophysical underpinning for any effort can be visualized as the triumvirate of biophysical resource potential of Water-Land-Biomass. These loops must be closed at the smallest scale providing for the basic biophysical needs, expressed as the triumvirate of biophysical resource demands of a society, in the form of Food-Energy-Shelter. The psychocultural environment presents the institutional resource potential in the form of the Government-Market-Communities. The evolution of these institutions and their mutual interaction particularly determine the equity and social justice systems as well as the endogeneity of a society to meet its developmental aspirations in a sustainable manner. The primary charge of these institutions would be to meet the psychocultural demands of the society in the form of Health-Education-Occupation.

While at the biophysical level one could be a little more deterministic to state that more immediate and local the needs are met the more sustainable it is likely to be, it is much more complex to determine the levels and scales at which psychocultural needs must be met. The nation state has been a unit in herding the demands at this level and has been overwhelmingly accepted as the scale at which these needs are addressed, despite exposures of the inability of nation states to meet these needs in acceptable manner. This has resulted in a situation where societal governance has come to mean 'keeping discontent within manageable limits' rather than a proactive process of creating conditions for life fulfillment. Thus, at the local level the development process, without the current complications of sectoral evolution, must attempt to meet the biophysical needs of the local people. Given the diversity of the biophysical environment, the processes may be simple or complex and its dynamics largely determined by the context. The psychocultural systems however have grown to become complex and often complicated, without the variety to deliver the basic demands placed on them, thereby forcing us to look for new paradigms and processes that can meet the aspirations of current generations without foreclosing future options. *Therefore, SUSTAINABLE DEVELOPMENT is practically an exercise of conserving existing options and generating more alternatives*.

The complexity of the current local, national and global conditions of the biophysical and psychocultural systems does not allow for a development space to unconditionally focus upon the various elements in an integrated manner, limiting the options to organizations at all levels – multilateral organizations to local institutions. Broadly these inputs could be characterized as the triumvirate of organized inputs of Technology-Skills-Finances.

The role of technology has been debated for long and several efforts have been made to mould global opinion to focus attention on 'appropriate' technologies and giving up of technologies that are

destructive of the biophysical environment. However, the fact remains that technology does often define and take over the nature of impacts on the biophysical systems and the interaction within and among the broad elements of the psychocultural environment. It is therefore necessary to identify technologies which can be quickly 'appropriated' by the community so that the impact of the technology can be focussed to meaningful in its context.

The need for finances in the development and evolution of societies has become far too critical than what can be philosophically justified. Further, these 'financial resources' have become progressively abstract with the world moving away from physical resource equated currencies to what has now been truly termed as 'paper' and 'paper-less' money with a large part of the global engine being fuelled by the stocks and their derivatives.

Finances have to be invested to make any intervention possible for the acquisition and maintenance of technologies and also to generate and utilise the other critical input of skills. Skill generation systems have largely been equated with the education process and the inadequacy of the global educational system is reflected in every local context. The dynamics of the social demands requires a rapid acquisition of skills and the ability to develop new skill sets.

Institutions are therefore defining the functional space, like mountain, mining, tribal, disaster prone regions and communities therein which the Environics Trust holds in focus and identifying the most optimal methods to deliver these inputs to the community. In order to search for that means, a basic set of paradigms are essential which govern the objective arena of the institution which emerges from intimate understanding of the functional environment.

These paradigms are succinctly stated as:

- 1. The diversity and the complexity of the ecosystems can be addressed only with a thorough understanding;
- 2. The potential of the ecosystems has to find expression in economic and ecological value terms;
- 3. The economic efficiency of the primary production systems will have to be considerably raised without diminishing their ecological value;
- 4. The critical role of Women in the design of development processes have to be recognised and consciously incorporated;
- 5. Communities and their institutions have to become self-dependent in Resources, Technologies and Investments;
- 6. Marketable surpluses have to be generated and value-addition must occur at local levels and
- 7. Strategic interfaces have to be developed with the outside world, so that integration with the larger economy is mutually beneficial.

In order to reach our primary goal of evolving a general and consistently applicable model, a process is necessary to identify and modulate the inputs within the functional space of the institution. This is the means by which the institution contributes to the larger societal process, the practice of which is the operational principle of Environics Trust. These activities are <u>Participative Research</u>, which enables documentation of existing conditions and the changes aspired; <u>Community Based Action</u> to demonstrate the possibility of transforming innovations into a physical and social reality; <u>Enterprise Development and Servicing</u> to respond to the current reality of the economic world and identify sustainable entrepreneurial and occupational niches and <u>Communication</u> to interface with a larger universe to mutually learn and contribute. These are ideas whose practices are taking shape and are reflected in the glimpses presented here.

And finally, a word of caution, no model is reality, but a framework to enable.

## GLIMPSES OF ACTIVITIES UNDERTAKEN

#### Medical Camp for workers and community affected by Coal Based Thermal Power Plant

### Location - Patadi, Korba, Chhattisgarh

A One-day Health Camp was organized at Government Primary School premises, village Patadhi, District Korba, Chhattisgarh on March 30. 2022. The Primary Health Centre (PHC) of Village Patadhi and New Korba Hospital (NKH), Kosabadi, Korba extended their support to the camp by providing manpower, medicines, and instruments for investigations. The staff from the Primary health centre took care of the registration of the patients, recording of the vitals (Height, Weight, Blood Pressure, pulse rate, Sugar levels, Haemoglobin levels etc.) and providing the required medicines to the patients. The staff also helped in segregating the patients symptomatically. The patients with complaints of hearing loss were send to NKH team for audiometry, and patients with respiratory complaints were further sent to Dr Ashish Mittal from Environics Trust for recording of occupational history and undergoing spirometry test as required. Volunteers from Ecoact assisted in filling the registration forms

A total of 144 patients attended the camp from 10:00 AM till 6:30 PM. Elderly, children from several nearby villages and workers from nearby LANCO power plant attended the camp.

58 patients displayed / narrated signs of occupational diseases like Noise Induced hearing Loss, Lung problems etc and were examined further. 24 audiometry tests were done by the NKH team while 35 Pulmonary Function Tests were performed based on occupational / environmental exposure history, chief complaints and physical examination for these 58 patients for further analysis and examination.

Out of 24 audiometry done, 15 were males and 9 were females. 67% (16) people showed moderate to profound hearing loss, while 8 (5 males & 3 females) have normal hearing sensitivity. It is to be noted that the audiometry test was performed at the site and without a noise proof enclosure and hence there is a possibility that ambient noise may have interfered. Further analysis needs to be done. It was sad to see even kids aged 6 and 8 years have hearing loss at such an age. The reasons for these need to be further investigated.

Out of 35 spirometry tests performed, 15 were males and 20 were females. Out of 20 females, 9 have normal spirometry, 11 have abnormal spirometry. Out of 15 males, 6 have normal spirometry and 9 have abnormal spirometry values. 57% of the examined population show abnormal lung function tests. In the absence of a chest x-ray it is difficult to further specify what can be the underlying problem but considering the severe dust and air pollution, occupational lung diseases may be a possibility and needs further investigations like sputum test, chest X ray and other investigations.

# Business and Human Rights in Asia: Enabling Sustainable Economic Growth through the Protect, Respect and Remedy Framework' Project

United Nations Development Programme | Environics Trust

Participative Research and Community Based Action under Trust's Objective

- To conduct research and development on environmental issues and human behavioural aspects;
- To assist, guide local governments, state and central government and international agencies in their development efforts;
- To provide assistance to communities to redress injustices and uphold their rights;
- To diffuse useful, educational, literacy, social, academic, professional and other knowledge

The project "Business and Human Rights in Asia: Enabling Sustainable Economic Growth through the Protect, Respect and Remedy Framework" aimed to make contributions towards greater rights awareness and enhancing access to remedy for vulnerable populations affected by iron ore mining operations by businesses across any one Indian state of Jharkhand.

The project was implemented in Noamundi and Manoharpur blocks of district West Singhbhum and Ranchi in Jharkhand State, to benefit the iron-ore mining affected community members residing in these districts. These community members belong to tribal communities namely Santhal and Ho.

The project undertook trainings in Chaibasa and Ranchi and advocacy activities in West Singhbhum district which is a scheduled V district. The district of West Singhbhum contributes to roughly 24% of iron-ore requirement of the country. Apart from iron ore, the district also has other mining operations for minerals including Manganese, asbestos, limestone, gold etc. Hence this mineral-rich district has numerous mining operations which inevitably have impacts on the lives of the tribal community members who live next to these mining operations. Most of the iron-ore mining operations are situated in the heavily dense forest areas in the state, causing displacement of tribal communities residing in these forests.

Folk media viz. puppetry and street performances were done to create awareness on the UNGP principles, framework of mining and avenues of remedy. A multi-cultural dedicated team held performances in 11 places in the mining belt with local communities. This was a learning in itself as the team also understood the local governance system adopted by the Ho tribes – the Manki Munda system in villages. A manual was prepared post trainings for communities. A resource centre has been established under the project which is functional and rendering guidance to the communities. The academic engagement with institutions is ongoing. The team collaborated with District Legal Services Authority (DLSA, Chaibasa) to further the cause of human rights in West Singhbhum. Some of the grievances have been taken up by the DLSA.

### **Continued Work on Street Vendors**

**DWOI | Environics Trust** 

Participative Research and Community Based Action under Trust's Objectives

- To conduct research and development on environmental issues and human behavioural aspects;
- To assist, guide local governments, state and central government and international agencies in their development efforts;
- To provide assistance to communities to redress injustices and uphold their rights;
- To diffuse useful, educational, literacy, social, academic, professional and other knowledge

Street Vendors form integral part of the economy but they also face several social, financial, regulatory and environmental challenges too. Environics with the help of hawkers federation conducted a short study on occupational health of the vendors in South Delhi locality. A sample survey was done with 253 vendors. Surveys were conducted in three phases out of which the first phase saw interviews with 50 respondents, the second phase saw interviews with 145 respondents, and the third phase saw interviews with 58 respondents. The key determinants of the questionnaire were to find issues with air pollution, challenges during covid-19. Alongside 3 OSH trainings were conducted with vendors to generate awareness, conduct physical examination, recommend do's and don't's and demonstrate physical exercises to ease the condition.

Hawker/Street Vendor communities were already struggling with poor sales due to COVID-19 and rise in prices of raw materials, but somehow managed to stay afloat. However, the lockdown changed everything. Nearly half of the respondents had lost their livelihood but only few received help from

civil society organizations and a negligible number of people received ration help from the government. 69% of children from the total group of school-going children have completely stopped their schooling.

Most of the hawkers/street vendors feel that vehicle smoke is a major cause of air pollution. They are not polluting the environment by travelling by those private vehicles yet are paying a great price in terms of their health. Thus, they are facing great environmental injustice.

The need for social security net and environmental justice to the most vulnerable communities which includes the workforce of Hawkers/Street Vendors is crucial in current times when the pandemic and the added economic crisis has pushed a vast section of the population into even greater distress and poverty. The COVID-19 pandemic has exposed the continued disregard of the informal economy by the government resulting in lack of livelihood security particularly in the urban areas.

Therefore, guaranteed employment conditions and health security with a safe and workable environment as well as environmental justice is required in order to counter any new distressing scenarios in the future.

#### Training on Occupational Safety and Health with Street Vendors in New Delhi

DWOI | Environics Trust

Street vendors (Hawkers) are an integral part of any city infrastructure. They provide important services at low costs. Services they provide are used by all strata of life and the different services provided like grocery, electronics, food, fruits and vegetables etc are extremely needed. Although they provide an invaluable service, their contribution is largely neglected and their welfare needs are not a priority for the government machinery. These workers perform their duties under open sky exposed to weather elements and experience exposure to vehicle exhausts, Road and construction dust, hazardous gases and smells emitted from open drains, garbage dumps, chemicals, rotten raw materials etc. All their needs viz health, social security, education, drinking water, hygiene etc are largely neglected. Several laws and regulations have been made to improve their conditions but the implementation remains on paper and benefits do not reach those in need.

Vendor groups and associations have been in touch to help organize trainings on Occupational health



and safety among their support base. An awareness training on Occupational health and safety was organized by Environics trust on 24 August 2022 at Meena Bazaar, New Delhi. About 48 street vendors participated in the training and learnt about the various hazards faced by them doing their jobs and how to protect themselves from the harms of such hazards.

Meena Bazaar is a bustling lane of street vendors between the historical buildings of Red Fort and Jama Masjid. This small, busy and narrow street was originally meant to host shops for the entertainment of women folk. Today things have changed a little with Meena Bazar being held daily from afternoon till evening. Stalls sell all kind of items including clothes, luggage, electronics, footwear and numerous food stalls. Currently the bazaar has a presence of about 400 permanent stalls which employ about 700 people. About 95% of these stalls have been issued a vending license by the Municipal Corporation of Delhi to sell their wares. The street

has been marked as a NO Entry for motorized vehicles and only pedestrian traffic is allowed considering the size and business of the street. Almost all the vendors here are part of the vending association.

The participants were informed about the findings of the survey done in 2019-20 where in the major health ailments identified were respiratory problems, eye irritation, Musko-skeletal problems. These were agreed upon by the participants. Other findings of the survey in terms of access to health facilities, access to government schemes, Health insurance, access to social security etc were also discussed briefly with the participants.

Dr Ashish Mittal, medical practitioner and OHS expert discussed with the participants the concepts of OHS and the principles of identification of Hazards and prevention. The basic human body structure was explained with a description of important organs and processes. Important body parts were drawn on a T-shirt for better understanding of the participants.

Light refreshments were served after the meeting and the discussion continued even during the refreshments. This was a new concept for the participants but they listened attentively however it was clear that it will take effort and time for some change to occur.

There are very few studies conducted on the health impacts on street vendors esp in India. In a report prepared by Mark Biedlingmaier, M.P.H. Candidate, Global Health and Environment, University of California, Berkeley School of Public Health for Environics Trust, it was found that most of the studies on street vendors focused only on the air pollution exposures from motorized vehicles. The report clearly found evidence of significant threats to the environmental and occupational safety of street vendor and a need for further research in the causal relationships of exposures as well as policy interventions to address pollutants. The report listed several recommendations which are being discussed along with the different stakeholders.

Even while there is a need for detailed studies and research to be done to gather information and data about number of street vendors and the health impacts faced by them, the next step of diagnosing the health impact needs to be tackled on a massive and urgent scale. There needs to be a mechanism where in the health impacts are not only detected early but the preventive aspects need to be focused on simultaneously. Safe working methods need to be developed in consultation with the vendors so that the methods can be readily incorporated in the way of work. Vendors who are most interested in earning their daily livelihood, neglect their health which only causes more distress down the line.

## Way forward

- 1. More such trainings will be held to enforce the concept of preventive health. A team of 15-20 vendors from different areas will be trained on the Train the Trainer Methodology.
- 2. More short videos to be created.
- 3. Discussion with government authorities to conduct health camps for street vendors.

Environmental Air pollution monitoring can be done to ascertain individual exposure to pollutants for further discussion with the regulatory bodies.

# Training of Occupational Safety and Health (OSH) with Street Vendors at Jama Masjid Metro Station, Gate No. 2, Delhi

In India, street vending and hawking professions is the second largest means of employment and it contributes about 50% in Indian GDP. After agriculture, it is the second largest source of employment in the country. But, developments of even basic infrastructure for street vendors are negligible. Almost all street vending sites, facilities for customer's parking, water supply, electricity supply, public toilets, garbage collection and solid waste disposals are totally absent. In such circumstances they are forced to work and live under hazardous conditions. Good numbers of hawkers/street vendors are living

under asbestos roof sheets. Unlike workers in many other informal occupations, vendors are primarily independent operators running their own businesses on a 'self-employed' basis and these communities provide environment friendly, cheap, more health conscious and quality service to society, without putting any special demands before governments.

Nearby Jama Masjid, these workers perform their duties under open sky without facilities of drinking water, electricity and hygienic toilets. Most of the workers use to sell their items by placing them on ground without proper seating facilities. Such working conditions led them to various kinds of diseases and infections like muscles pains in muscles, bones and necks, various kinds of allergy, upset stomach etc.

Earlier, an OSH training was organised in collaboration with NHF in the month of August 2022 which helped in making improvements in street vendors' health. Success of previous training stimulated more street vendors to attend such training sessions. And so, on request of street vendors/hawkers' local leaders, this next awareness Training on occupational health and safety was organised by Environics Trust in collaboration with Meena Bazar Hawkers Associations (affiliated with MHF) on November 16, 2022, that saw participation of more than 100 street vendors/hawkers. In both trainings, they learned about the various hazards faced by them and how to protect themselves from the harms of such hazards.

Participants requested to organise more training at different locations of street vendors and share their health-related issues with local leaders so that a solution could be found of that particular problem. Now, it is a future plan to organise a master trainers training by taking some sensitive vendors who can train other vendors in their localities.

#### **Air Pollution Monitoring and Reports**

Air Pollution is continuously being monitored in Korba and Delhi using the installed Low Cost Portable Air Monitor Equipments. The data clearly show the severely polluted months during the winter season while air pollution reduces during summer and rainy season. Meteorological factors play an important role in air pollution and hence plans need to be made for an air shed rather then city specific so that efficient action can be taken and results seen. Regular monitoring have been done using these equipments and reports shared with the local communities for discussion with different agencies so that air pollution can be reduced.

#### **Impact of Diwali and Firecrackers**

Time considered – 24 hours from 8AM on 12th Nov to 8 AM on 13th Nov 2022

Diwali is a festival of lights. In North India, Diwali has become synonymous with high Air pollution because of bursting of fire crackers and other meteorological factors irrespective of the dates when the festival is observed. This is the time when the Air Quality starts deteriorating in the Northern part of India with the advent of the winter season and other factors. Diwali and fire crackers go back a long way. Crackers have always been burst in large numbers by people on this occasion to express their joy and celebration. In view of the increasing pollution in NCR region, the supreme court has placed restriction on bursting of crackers including a complete ban in 2022 which was also extended to 2023. Even green crackers have been banned in Delhi region. The Delhi Government in fact, criminalized bursting of crackers with a 6-month jail and a fine. Although there has been increasing awareness on environmental impacts due to bursting of crackers and many families foregoing this mode of celebration, still crackers were burst in large numbers through out the Diwali night in Delhi and other places. From the personal experience, number of crackers burst has been steadily declining in Delhi with increased awareness

The following data attempts to provide a brief glimpse into the impact of bursting of crackers as measured by Portable air quality monitors installed by Environics Trust. The monitors have been installed in Korba and Delhi.

1. City Wise AQI – for 24 hrs period. Delhi beats Korba in this parameter by a big margin with AQI in both places falling in the very poor category. Average of different parameters can be seen in the below table

	PM 2.5	PM 10	AQI	Max AQI	Avg HI	Max HI	AQI Category
Korba	183	201	349	1720	28	46	Very Poor
Delhi	244	292	395	1096	24	31	Very Poor

2. Maximum AQI, time Interval and location. The table shows the Max AQI measured within a 15 minute time interval. Korba leads in this parameter with AQI reaching upto a whopping 1720. There is no chart for such high values. Even Delhi recorded Max AQI over 1000 which can be very hazardous.

	Interval	Location	Value
Korba	12 Nov 10:30:00 PM	Gud Deva	1720
Delhi	13 Nov 00:00:00 AM	Neb Sarai	1096

3. Hourly City Wise AQI – Table and Chart

	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM
Delhi	285	302	243	248	190	175	142	121	107	107	172	271
Korba	256	181	231	171	219	147	160	152	200	297	384	421

	8 PM	9 PM	10 PM	11 PM	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM
	FIVI	FIVI	FIVI	FIVI	AIVI	AIVI	AIVI	AIVI	AIVI	AIVI	AIVI	AIVI
Delhi	385	584	679	759	755	604	553	557	438	485	514	476
Korba	403	524	689	427	390	368	330	366	337	340	687	380

The hourly data shows that the AQI started increasing after 5 PM on 12<sup>th</sup> November in both cities. IN delhi, AQI started decreasing after 11 PM while in Korba, the decrease is noticed after 11 PM with another spike at 6 AM. The data shows a brief 6 hrs interval when the AQI deteriorated quite a lot because of the bursting of crackers. However, the impact started dissipating post midnight when the AQI again became dependent on the base load factors in different locations. Although the impact is observed only for a few hrs, it is quite severe and hence care needs to be maintained. AQI going up to

a maximum of 1720 (Although for a short duration) is very bad for the health and can have severe impacts.

Considering hourly intervals in this 24-hour period, the number of intervals where AQI was more than 200 in different cities is shown in below table. At Delhi, AQI was above 200 post 6 PM on Nov 12 while Korba had 19 such intervals and not surprisingly all of them after 3 PM on Nov 12.

Location	No of Intervals – AQI >200
Korba	19
Delhi	17

4. Maximum AQI Hour Wise at both cities can be seen in the table below.

	8	9	10	11	12	1	2	3	4	5	6	7
	AM	AM	AM	AM	PM							
Delhi	408	345	339	369	297	307	210	177	140	193	332	367
Korba	358	352	374	348	353	346	348	353	399	760	616	623

	8 PM	9 PM	10 PM	11 PM	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM
Delhi	549	941	1009	941	1096	888	776	678	534	594	674	700
Korba	478	1434	1720	672	533	461	342	398	395	398	1706	500

5. Hourly data trend- selected monitors – 4 monitors at Korba

The data again shows an increasing trend around 5 PM which normalizes after midnight at all locations with a spike at Gud Deva at 6 AM.

6. Hourly data trend- selected monitors – 5 monitors at Delhi

The data again shows an increasing trend around 5 PM which normalizes after midnight at all locations.

The data shows that there is a severe impact due to bursting of crackers, but this impact is short-term. With increased awareness, the number of crackers being burst has gone down but still a large number of burst every year. However, crackers are not the only reason for high air pollution in North India. Other factors like vehicular and industrial emissions, construction dust, road dust, burning of biomass etc are reasons which are prevalent throughout the year and need to be tackled at all times and not just remembered when Air Pollution becomes poor. Taking care of our environment should become second nature to all of us and the government need to take immediate and strict action against all

polluters not withstanding any political or economic reasons. Air Pollution impacts everyone and not just the common masses.

#### PILOTING ALTERNATIVE LIVELIHOOD OPTIONS FOR COAL-DEPENDENT COMMUNITIES

#### Nawapara, Korba District

The Nawapara hub is hosted at the Mahamaya Farmer Producer Company. This has facilities for processing cashew, packaging of rice and is a procurement and sales hub for forest produce – Jamun, Mahua and Chironji.

A 5-MT solar cold-storage unit has been established A mini-laboratory for producing bio-fertilisers and bio-pesticides is being established

#### Kudumkela, Raigarh District

Thirty Acre land has been secured and basic infrastructure has been established for undertaking organic farming. This also functions as a procurement hub for forest produce mainly Mahua and Chironji. Flyash bricks based building and local mud-brick based construction has been tested and used for farm infrastructure.

#### **Research and Development**

- 1. Potential use of recycled waste-plastic boards for developing kiosks
- 2. Small Scale Production of mushroom at household level
- 3. Sanitary Napkin Production and Establishment of User Groups
- 4. Feasibility Studies were undertaken for establishing the 5-MT solar cold storage
- 5. Process of establishing a laboratory for production of bio-fertilisers and bio-pesticides
- 6. Survey of Selected Villages on Potential for Renewable Energy Deployment
- 7. Potential for Wi-Fi based radio has been explored
- 8. Potential for Screen Printing for packaged products
- 9. Medical Camp to understand the Occupational and Environmental Health of People Around Thermal Power Plants
- 10. Air Quality Monitoring and Product Development

#### **Setting up and Operating Product Enterprises**

- 1. Four Farmer Producer Companies are functioning
- 2. Three Sanitary Napkin Units are operational
- 3. Mushroom production units are operational but sporadic due to extreme weather conditions
- 4. Solar Cold Storage
- 5. Bio-fertiliser and Biopesticide and
- 6. Branding and Testing of Sale of products from the Producer Companies in Delhi

#### **Beneficiaries**

- 1. The cold storage is already benefitting over 500 farmers on a continuing basis
- 2. Over 4000 person days of work was generated in farm and off-farm work
- 3. Over 1500 women are new users of Sanitary Napkins
- 4. Over 100 people tested in medical camp and appropriately advised for follow-up

#### a. Extent of Objectives Achieved

- 1. Most of the objectives of the project for the year have been achieved and this being a continuing process several activities are concurrently underway.
- 2. The second wave of Covid last year delayed some of the planned activities and processes.

### **Policy Level**

- 1. The Member of Parliament from Korba, was present for inauguration of the Solar Cold Storage and has assured support to furthering renewables and livelihood in the region.
- 2. The Speaker of the Chhattisgarh Assembly has assured to appraise the State Government of importance of these intervention and need for wider support.
- 3. We are in discussion with NABARD for exploring ways to scale up and on Green Climate Funds.
- 4. We have received several invitation to talk about this pilot effort on Just Transition for coal dependent communities both within the country and outside.

#### 1. REFLECTIONS

#### a. Learnings

- 1. There is a huge potential for systematically generating alternate livelihoods for the coal dependent communities.
- 2. This has become even more critical as there is a rapid ramping up of renewables with costs lower than coal fired plants
- 3. The impact of the pandemic needs to be factored in various activities, both in terms of planning and execution in a safe manner.
- 4. Lot more investments have to be made in capacity building of the local communities in managing these activities
- 5. The programme needs to be sustained for few years to have appropriately trained team.

#### b. Changes from the original proposal

- 1. There has been no significant change from the original proposal but there have been some unanticipated delays and change in sequence of activities.
- 2. This largely due to the second wave of Covid-19.

# c. Challenges and Risk

- 1. The pandemic continues to be a significant risk as team members become vulnerable, especially those who have suffered from a bout of the disease. We are trying to deal with this sensitively.
- 2. Extreme Weather Events Trying to adapt with multiple crops and diversity of livelihoods.
- 3. We may have sudden end to some of the mining activities in the region and we still have to figure out how to deal with these disruptions.

### **Feed Back**

- 1. Linkages to support various initiatives for sourcing finances, skills and technologies
- 2. Continued Guidance to enable mid-course corrections and changes.

#### **ASBESTOS – RAJASTHAN STATE PROFILE**

#### INTRODUCTION

Rajasthan is located in the north-western part of India between Latitude 23°03'-30°12' N and Longitude 69°29'- 78°17'E. It is the largest State in the country with an area of 342, 239 sq. km. The state covers an area of 342,239 square kilometres (132,139 sq mi) or 10.4 percent of the total geographical area of India. It is the largest Indian state by area and the seventh largest by population. Rajasthan is considered as a museum of minerals, both metallic and non-metallic including renowned building stones. The deposits of asbestos are chiefly located in the south of Rajasthan state. Asbestos is limited to the ultramafic intrusives inside the rocks of the Aravalli, Delhi supergroups and Bhilwara. Rajasthan state possesses amphibole and chrysotile varieties of asbestos¹.

Occurrence o	f Asbestos Minerals in Rajasthan	Asbestos Occurrence
Ajmer	Mixed amphibole minerals	HARYANA LUTTARAKHAND
Bhilwara	Mixed amphibole minerals	DELMI UTTAR PRADESH
Dungarpur	Mixed amphibole minerals	RAJASTHAN AAjmer
Pali	Tremolite, chrysotile mixed with other amphibole minerals	Udalpura May 5 Character
Rajsamand	Tremolite, actinolite and mixed amphibole minerals	GILIARAT
Udaipur	Chrysotile, tremolite and mixed amphibole minerals	
Indian Minera	als Yearbook, 2020 (Advance Release)	

1. Industry Scenario - Rajasthan is a natural corridor between the wealthy northern and the prosperous western states, making it an important trade and commerce centre. The natural resources, policy incentives, strategic location and infrastructure in the state are favourably suited for investments in sectors such as cement, tourism, agriculture and allied industries, mineral and mineral processing industries. Given the availability of a large variety of metallic and non-metallic industrial minerals, there is a huge potential of mineral-based industries in Rajasthan. In addition, there is well-developed transport, communication and power infrastructure in the State. The mineral policy of the State has been formulated so as to facilitate investment in the mineral-based industrial sector. The State offers an investor-friendly environment and welcomes Indian and multinational investment in mineral-based industries.

There are many several small milling units present in the state which are unregistered but functions.

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<sup>&</sup>lt;sup>1</sup> https://www.jagranjosh.com/general-knowledge/rajasthan-minerals-1375338986-1

SI.No	Name of Plant	District
1	ARL Infratech	Jaipur, Bhilwara
2	M/s Ankit Roofings Ltd.	Jaipur
3	M/s A Infrastructure Ltd	Bhilwara
4	M/s Visaka Industries Limited	Tonk
5	M/s. Bajarang Wire Products (India) Pvt Ltd	Jaipur
6	M/s Rudra Priya Paper & Board Industries	Dholpur
7	M/s MRK Pipes Limited	Jaipur
8	M/s Agam Cement Product Pvt. Ltd.	Jaipur
9	M/s Ganpati Asbestos Pvt. Limited.	Jaipur
10	M/s Siddarth Udyog	Jaipur
11	M/s G.B. Asbestos Pipes	Jaipur
12	M/s MRK Pipes Limited	Jaipur
13	Roofit Industries Limited.	Jaipur
14	M/s Mohit Pipes Pvt. Ltd.	Jaipur
15	M/s Shri Hari Pipes (Private) Ltd	Jaipur
16	M/s Gupta Engineering Works	Jaipur
17	Rajasthan Asbestos Cement Co.	Jaipur
18	G.G. Pipes Pvt. Ltd.	Jaipur
19	Shree Jagdambay Enterprises (Trader)	Alwar

2. Hazardous Waste Generation in Rajasthan-The top land fillable hazardous waste generating States are Gujarat (45.16%), Rajasthan (16.68%), Maharashtra (8.25%), Jharkhand (5.17%), Tamil Nadu (5.13%), Andhra Pradesh (4.99%), Telangana (3.26%), Odisha (1.68%), Kerala (1.67%) and Uttar Pradesh (1.61%) which together contribute 93.60% quantity of land fillable hazardous waste generated. Even after having so many manufacturing units, only 2723.45 MTA of hazardous waste was generated under Schedule-1 out of which 24.75 MTA are land disposable as per the CPCB. Units like Agam Cement Products Pvt. Ltd. are not registered under the Industrial Projects-1 but are registered under the Hazardous waste handling for asbestos, making it difficult to gaze at the real contamination...

3. Mining in Rajasthan - As per the Mineral Year Book 2019 and NMI database, based on UNFC system, the total reserves/resources of asbestos in the country as on 1.4.2015 has been placed at 22.95 million tonnes. Out of these, 0.025 million tonnes are placed under Reserves and 22.92 million tonnes under Remaining Resources. Out of the total resources, Rajasthan accounts for 13.61 million tonnes (59%) and Karnataka 8.28 million tonnes (36%). The remaining five per cent resources are estimated in the States of Jharkhand, Andhra Pradesh, Odisha and Uttarakhand.

In Rajasthan, Ajmer (Mixed amphibole minerals) Bhilwara (Mixed amphibole minerals) Dungarpur (Mixed amphibole minerals) Pali (Tremolite, chrysotile mixed with other amphibole minerals) Rajsamand (Tremolite, actinolite and mixed amphibole minerals) Udaipur (Chrysotile, tremolite and mixed amphibole) mine are and abandoned pits are present.

Almost the entire production of silver in the country comes from Rajasthan. The State is a major producer of copper ore/conc., limestone, ochre, phosphorite/rock phosphate and talc/ soapstone/steatite. The State possesses substantial share of the total resources of potash (94%), lead & zinc ore (89%), wollastonite (88%), silver ore (88%), gypsum (82%), ochre (81%), bentonite (75%), fuller's earth (74%), diatomite (72%), felspar (66%), marble (63%), asbestos (61%), copper ore (54%), calcite (50%), talc/steatite/soapstone (49%), ball clay (38%), rock phosphate (31%), fluorite (29%), and tungsten (27%). Important minerals that are found to occur in the State are: asbestos (amphibole) in Ajmer, Bhilwara, Dungarpur, Pali, Rajsamand & Udaipur districts; ball clay in Bikaner, Nagaur & Pali districts; barytes in Alwar, Bharatpur, Bhilwara, Bundi, Chittorgarh, Jalore, Pali, Rajsamand, Sikar & Udaipur districts; calcite in Ajmer, Alwar, Bhilwara, Jaipur, Jhunjhunu, Pali, Sikar, Sirohi & Udaipur districts; talc/steatite/soapstone in Aimer, Alwar, Banswara, Bharatpur, Bhilwara, Chittorgarh, Dausa, Dungarpur, Jaipur, Jhunjhunu, Karauli, Pali, Rajsamand, Sawai Madhopur, china clay in Ajmer, Barmer, Bharatpur, Bhilwara, Bikaner, Bundi, Chittorgarh, Dausa, Jaipur, Jaisalmer, Jhunjhunu, Kota, Nagaur, Pali, Sawai Madhopur & Udaipur districts; and copper in Khetri belt in Jhunjhunu district & Dariba in Alwar district. Deposits of copper are also reported at Ajmer, Bharatpur, Bhilwara, Bundi, Chittorgarh, Dausa, Dungarpur, Jaipur, Jhunjhunu, Pali, Rajsamand, Sikar, Sirohi and Udaipur districts. Occurrence of other minerals, namely, Dolomite in Ajmer, Alwar, Bhilwara, Chittorgarh, Dausa, Jaipur, Jaisalmer, Jhunjhunu, Jodhpur, Sikar & Udaipur districts; felspar in Ajmer, Alwar.

In Rajasthan the processing of asbestos bearing rocks obtained from mines involved simple crushing and grinding. For crushing jaw crushers are used. The ore with higher percentage of asbestos contents yields powder, which is fluffy in nature (coarse grains) and light in weight whereas the ore with less asbestos content changes to heavy fine powder. No other operation is involved in processing. In the majority of grinding mills (asbestos mills), a pulveriser is used in a closed circuit hammer mill consisting of air cyclone.

4. Import and Consumption - Rajasthan is also one of the states using huge quantities of imported Chrysotile fiber from Russia, Kazakhstan and Brazil. One of the top importer of the carcinogenic raw fiber in the state is A-Infrastructure which alone have imported around 11671 Tonne of raw fiber in the financial year 2019-2020 accounting for about USD 6129593 mainly from Russia. While companies like ARL made imports of 16722.5 tonne in the previous financial year accounting for USD 5840038.6. A list of state wise imports are showcased in the table below for fiscal year 2019-2020 for the state. Mundra being the nearest port is used for the import purpose mostly from Russia.

5. About Disease- The practical information for assessing the burden of nonmalignant respiratory diseases that arise from occupational exposures to airborne particulates (mainly dusts) is limited. The respiratory diseases such as three main pneumoconiosis: asbestosis, silicosis and coal workers' pneumoconiosis can be widely seen and noted. The focus should be on assessing the current burden of disease that results from past and current occupational exposures to airborne particulates. Due to lack of practical understanding the day to day burden of disease is increasing in the state.

As per Agency for Toxic Substances and Disease Registry (<u>ATSDR</u>), asbestos mainly affects the lungs and the membrane that surrounds the lungs. Breathing high levels of asbestos fibers for a long time may result in scar-like tissue in the lungs and in the pleural membrane (lining) that surrounds the lung. This disease is called asbestosis and is usually found in workers exposed to asbestos, but not in the general public. People with asbestosis have difficulty breathing, often a cough, and in severe cases heart enlargement. Asbestosis is a serious disease and can eventually lead to disability and death.

Nonmalignant respiratory diseases in workers can result from exposures to airborne agents during the course of their work. These agents are mainly in the form of particulates or dusts1 and the primary route of exposure is inhalation. The agents gain access to the respiratory system and are either deposited (in the case of dusts) or enter the circulatory system. For some agents, there is a clear connection between exposure to the agent and the disease (e.g. silicosis is only caused by exposure to silica). Some agents cause more than one type of disease and more than one type of respiratory disease. For example, asbestos can result in malignant conditions of the lung and the pleura (the inside lining of the chest), malignant conditions of the peritoneum (the inside lining of the abdomen), and nonmalignant conditions of the lungs (asbestosis and COPD).

Asbestos as a cause of asbestosis has also been studied extensively in animal and cellular experiments as early as 1977 by the International Agency for Research on Cancer (IARC) and the International Programme on Chemical Safety (IPCS) 1998. Asbestosis risk is influenced by cumulative exposure, exposure intensity, fiber type, age, work process, and possibly smoking. **The disease can progress, even after cessation of exposure**.

- 6. Types of Fibrosis Exposure to asbestos in the human body can cause many diseases, such as lung cancer, mesothelioma, laryngeal cancer, ovarian cancer and asbestos lung (pulmonary fibrosis), as well as pleural plaque, thickening and pleural effusion. The incubation period of asbestos lung is more than 10 years, and the incubation period of lung cancer and mesothelioma is 20-40 years. Deaths caused by asbestos account for about half of deaths caused by occupational cancer. Asbestos dust dismantled, shattered asbestos tiles, asbestos-containing building boards, etc. disassembled, crushed, and improperly buried in the process of asbestos dust can pollute the surrounding environment. Asbestos dust released during braking of automobiles has also become an important source of pollution in the urban environment. Recent studies have confirmed that asbestos pollution in the air can cause chronic harm to the human body.
- 7. Why it is important- As most countries have banned the use of asbestos, only a few countries (especially Russia, India and China) are still using asbestos in large quantities; of these, China and Russia are the largest users. Therefore, the incidence of asbestos-related diseases (especially malignant mesothelioma) is expected to increase significantly in the coming decades. Therefore, it is time for developing countries to completely ban the use of asbestos. Asbestos is widely used because of its many characteristics, but it has been confirmed as a human carcinogen by the International Center for Cancer Research (IARC) and the US Environmental Protection Agency (EPA). Every

occurrence of asbestos exposure disease means that the victim, his unit, and the entire society have to pay a high price for it.

The signs of asbestos mining in Rajasthan are still visible in the form of exposed pits which are abandoned mines, these rocks have presence of asbestos fibre which are left unattended and open to the environment for weathering and ultimately getting airborne and further to water and land environment. The contamination caused by such abandoned mines and lack of safety measures in the manufacturing units are putting lives into grave danger. Hence it becomes very important for the state government to put things in place and save lives.

8. Legal Aspects- In 2015, in an order of the National Green Tribunal, the legal counsel representing the Indian Bureau of Mines stated "that there is no asbestos mining presently operational anywhere in the country and the operations of the mines of associated minerals with asbestos has also been halted." The statement was supported by counsel representing respective states. The order went on to direct that states in which asbestos mining occurs survey all the asbestos mines and associated minerals and report the impact of the mines and pits that are in existence as well as what steps the state government proposes to take to restore and restitute the affected area.

In 2018, the principal bench of National Green Tribunal, chaired by Hon'ble Mr. Justice Adarsh Kumar Goel ordered the respondents in the case of -Sh. Kalyan Bansingh & Ors. Vs. HIL Ltd. & Ors. , and Environics Trust Vs. Union of India &Ors (M.A. No. 1114 of 2013& M.A. No. 1115 of 2013) to comply with the judgement dealing with contamination caused by Asbestos mines in the country in which the State of Rajasthan was one of the respondents.

In the order, Justice Goel has asked the Ministry of Environment, Forests and Climate Change (MoEFCC) to collect data from the respective mining departments and state pollution control boards regarding all the mines operating in these states, whether mines which were operational have ceased to operate and the measures taken to reclaim closed mines. The tribunal also asked for a health survey along with the analysis of ambient air and water quality around these mining areas. Further, the bench has also asked the states to list the number of industries processing asbestos in these states. The bench has aforesaid that, it is indisputable that asbestos mining activity is hazardous and causes serious environmental and health hazards, including diseases such as cancer and have directed the governments of Jharkhand, Rajasthan, Karnataka and Andhra Pradesh to scientifically close all abandoned asbestos mines

The Hon'ble court has also asked to make a committee which in turn will prepare the action plan and implement it. The guidelines for the constitution of the committee and implantation of the required action plan is specifically for the state of Jharkhand but is open to other three states too in order to ascertain the reclamation (Para 28 of the order). Prior to the order, the State of Rajasthan in an affidavit filed on 24.02.2015 stated that the mines have been closed and rules have been complied already. But during a visit earlier in 2018, a different scenario was presented. Many sites were identified at various places where the mines were abandoned without any scientific closure. At some places the barbed wire were the only safety measures taken by the government/ project proponent.

Children were seen playing in and around those abandoned mines. Some children were also seen playing with the raw asbestos fibre, without realising the consequences in the future. As per the judgement passed by the Hon'ble court the state was requested to comply with the required measures needed for the scientific closure of the mines and identification of the victims. The order passed by the chair had to be implemented and the concerned authorities had to take the responsibility to do the needful. The action plan for abandoned mine closure and compensation of the affected individuals was to be prepared within one month and a compliance report was to be submitted by the State by April 2019 to the Hon'ble court. But no submission happened.

On the other hand, the State of Jharkhand made a submission in August 2020 of a draft and compliance report to the court, the compliance report of National Green Tribunal order of January 07, 2020 registers the consideration of the steps for restitution of the area which was earlier under the Roro asbestos mines and similar steps could have been referred by the State of Rajasthan too.

Some other cases are:

- Kalyaneshwari vs U.O.I. & Ors on 21 January, 2011<sup>2</sup> This petition under Article 32 of the Constitution of India has been filed by the petitioner Kalyaneshwari (a registered Society), through its Chairman, with a prayer that a writ of mandamus be issued directing the Union of India and other respondent-States to immediately ban all uses of asbestos in any manner whatsoever; further that a committee of eminent specialists be constituted to frame a scheme for identification and certification of the workers/victims suffering from asbestosis or other asbestos related diseases or cancer.
- Hyderabad Industries Ltd. vs State Of Rajasthan And Ors. on 2 August, 2007<sup>3</sup> The principal contention
  is the sub-clauses were violative of Article 304(a) of the Constitution of India as by granting exemption
  to the manufacture of asbestos cement sheets and bricks having contents of fly ash twenty five percent
  or more by weight in the State of Rajasthan, the discrimination was being done to the import of that
  product from other states.
- The NGT August 10 directed the constitution of a joint committee to look into the matter of illegal mining in the tiger reserve in Rajasthan's Alwar district<sup>4</sup>. Alwar has some of the major deposits of the minor mineral of asbestos and these illegal mining may lead to mining of asbestos fibre illegally.
- 9. Regulatory Status Rajasthan one of the four states that has been asked by the honourable National Green Tribunal to restore the abandoned asbestos mines scientifically and explore the provision of compensation

All in all, the above situation shows that the obvious problems (dust hazards, occupational diseases) caused by asbestos mining and manufacturing in India have been exposed and are serious, and the invisible problems in the use and consumption of asbestos have not yet been discovered and erupted on a large scale.

More over as per the MoEFCC webpage records Rajasthan is also one of the top violators of regulatory mechanisms as most of its asbestos industry lacks regular monitoring and record maintenance. Out of total 19 recorded manufacturing units in Rajasthan only 3 can be seen to have updated their monitoring report and 13 have not updated their six-monthly compliance reports showing the lax nature of the system.

The Central Pollution Control Board has published a number of documents regarding environmental issues and preventive & control measures for pollution. There is documentation on the Human Health Risk Assessment Studies in Asbestos based Industries in India by CPCB, which clearly showcases the violations that happened.

10. State Pneumoconiosis Board - People having pneumoconiosis will be declared permanently disabled, and all benefits under the Persons with Disability Act, 1995, will be accrued to them and their families.

<sup>&</sup>lt;sup>2</sup> https://indiankanoon.org/doc/131981352/

<sup>&</sup>lt;sup>3</sup> https://indiankanoon.org/doc/1890219/

<sup>4</sup> https://www.downtoearth.org.in/coverage/mining/despite-ban-mines-thrive-in-sariska-reserve-30946

- Pension: They are entitled to receive a pension up to Rs 1,250 per month under the social
  justice and empowerment department. Family pension: Rs 3500 per month will be
  provided to the legal heir or dependent for 5 years or till the child becomes self dependent,
  whichever is later.
- Rehabilitation assistance: Rs 4 lakh (from Rs 2 lakh) will be given as one time assistance
  after certification from Pneumoconiosis Board. Rehabilitation pension:Rs 4000 per month
  or 50% of the prescribed minimum wages of unskilled workers, whichever is higher during
  the lifetime of the worker.
- Financial assistance for education: One time education assistance for children Rs 25,000.
   Maximum-2 children only.
- Funeral assistance: Rs 10,000 to the dependants to perform the last rites of the victim.
- Assistance on death: Rs 1 lakh to the nominee/legal heir of the deceased victim.
- Standing committee: A standing committee under the chairmanship of Rajasthan's chief secretary D B Gupta had been formed to monitor and periodically review progress of implementation of the policy.

Statistics: There are more than 11,000 silicosis patients in Rajasthan and over 1,600 people have died due to the disease. Though these numbers are discrepant as Rajasthan has the highest number of silicosis cases and there are several villages which have lost their sons to the disease.

- Pneumoconiosis Fund: The state announced the creation of a Pneumoconiosis Fund. It will
  be majorly financed by money from the District Mineral Foundation (DMF) and operated
  by Rajasthan's Social Justice and Empowerment Department.
- As of 2019, only 47 cases of Asbestos Related Disease victims have been certified by the Pneumoconiosis Board. There have been cases identified by different groups but as the policy is available for compensation for such cases, the registered and certified cases are officially counted. Several are still waiting for medical follow up and compensation.

Some of the locals with prominent health issues similar to ARD but have not been identified by the Pneumoconiosis board.



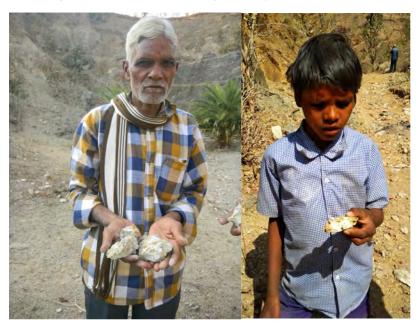
Asbestos Fibers are clearly visible in some of the abandoned pits which are prone to weathering.



Illegal mining of associated minerals in the areas where asbestos exists in abundance.



Dangerous Pits around the Villages from prior asbestos mines.



Old and young equally exposed to the dangerous asbestos fibre.

# **FINANCIALS**

RECEIPT AND PAYMENT AC			APRIL 2021 TO 31ST MARCH 2022	ANDUNE	AMOUNT
RECEIPT		AMOUNT	PAYMENTS	AMOUNT	AMOUNT Rs.P
Opening Balances:- Cash inhand Cash at ICICI Bank-A/c 017101006263 Cosh at SBI Bank (Main) A/c 39738126085	Rs.P	Rs.P 2423.00 7303.24 20380512.00	FCRA Project Costs:- Asia Monitor Resource Centre IBAN Netwok Activities COVID 19 and Labour Meeting Expenses	8s.P 335900.00 107000.00	
Green at SBI Bank (Saket) A/e 39953471740 FCRA Grant Received Assa Monitoring Resource Centre Institute Ends New Ways to Palo Alto Publish What You Pay Australia Adissas Kourdmation in Doutshland Cholal Green Grants Infolice South Foundation For Ecological Security Nature of Scarp and others Institute on Piecel Deposit French Officed Deposit French Opposit	601376.00 2970055.00 38017.00 2215832.00 5639328.00 551817.00 12767328.00 22816.00 304491.00	12787328.00 5000000.00 502150.00 327307.00 46093.00 2763210.00	SA Sub Regional Meeting Expenses Social and Environmental Network Coallation Human Rights and Development Adivast Koordination in Deutshland Support For Relief in the Altermath of Cyclone Amphan Publsh What You Pay Enabling Community Participants in Natural Resources Global Green Grants Community Involvement and Decision making on Tourism in Himachal Pradesh Kariranga Jeepal Assam Emergy Indepedence for Tribal Community by Identifying Technologies to mmet various End Use New Ways to Palo Alto Training on Docupational Health and safety with Street Vendors Mac Arthur Foundation Piloting Alternative Livelihood options For Coal Depedent Communities -Chattisgarh Publsh What You Pay-Australia Documentation and Research on Natural Gas	478537.00 200000.00 40000.00	
	_	43571449.52			24113476.6
Balanc	in /found	43571449.52	Balance/fwd		24113476.6
Balanc	e/twa	435/1449.32	Eleven Eleven North South Movement in Flanders Screening Breathless		735298.4
			Jubile South Cycle Rally for Climate and Tax Justice Both Ends Just Transistion in Central India Foundation For Ecological Security Facilitating Claims Under Community Forest Rights Administrative and Other Overheads Fixed Deposit (Interest) Bank Charges Closing Balances Cash in Hand Cash at Bank A/c 017101006263 Cash at Bank -State Bank of India SBI -MAIN A/c 39738126005(FCRA) SBI-UC-(SAKET)A/c 39953471740		38025.0 4795103.0 4831920.0 4314636.1 46093.0 27354.4 3913.0 700319.2 3445880.5 499430.1

For Environics Trust

R.Sreedhar (Managing Trustee)

Date: 30/09/2022 Place:- New Delhi

For Suvod and Associates Chartered Accountants

Environics Trust is a not-for-profit research and community development organisation and an enabling institution. Environics conducts participatory research on issues of environmental and human behavior and uses these outcomes for innovative community development programmes.

Environics provides research and evaluatory services to International, National, State and Local Institutions and directly works with marginalised communities such as those in the mountain regions, tribals and communities adversely affected by mining and industrialisation. Environics conducts formal and informal courses with reputable academic institutions.

Environics anchors several networks and partnerships. It is currently the Secretariat for the Indian Ban Asbestos Network and the Mineral Inheritors Rights Association affiliated to the Global Publish What You Pay Coalition. Environics is a co-founder and promoter of the mines minerals and PEOPLE alliance (mm&P), the Indian Network on Ethics and Climate Change (INECC), the EIA Resource and Response Centre (eRc), Occupational and Environmental Health Network of India (OEHNI). Environics is a member of the International Coal Network, Asian Peoples Movement for Debt and Development, Tax and Fiscal Justice Asia (TAFJA), NGO Forum on ADB, Fair Finance Asia and the Indo-Nepal Joint Action Forum.

www.environicsindia.in