

Conference proceedings

Placing Metal Sensitivity as a pedagogic necessity for social movements

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Abstract

Various parts of the world have been historically witnessed numerous and intense resistance towards mining of minerals due to wide range of reasons that includes social, political, cultural, health, economical and ecological. Largely the discourse around resistance covers the negative impacts on the communities directly affected by the mining projects. 'Metal Sensitivity' is missed from the discourse and this paper argues for its inclusion in practice and discourse. Although at the source of mineral extraction there stiff resistance movements they very often lack sensitivity towards the chain of usage of the metals that has its veins in powerful consuming classes of the world. This situation very often caps the huge potential for the widening of the horizons of the communities in the resistance at source of underground as well as open cast mining of various mineral. Movements - often functioning in 'fire brigade' mode - neglect this crucial dimension. The result is that consequences are either 'success' stories or stories of 'combat'. The 'success' stories are those wherein the mining proposals are stalled or at least temporarily halted due to movements ability to put spoke in the political system. Mining interests however do not die, and system very often 'upgrades' itself and strikes back again after the gap of few months or few years.

While system takes time to 'upgrade' itself, movements in the meanwhile are left with no agenda to pursue mobilization programs till mining project re-emerges as 'visible enemy' again. While those in combat mode flows from one 'victory' to another or one 'setback' to another or from 'setback' to 'victory and vice versa.

The movements very often not able to break through in practice and theory due to absence of required mindset and approach and too many people in movements gets 'rolled in' self-limiting logic. 'Metal Sensitivity' as a concept and practice not only essential for de-growth of society as an initial condition but has to be inducted as a necessary pedagogic ingredient for movements engaged in resistance of mineral resources. This addition widens the horizons to include critical appraisal of self as well as global consumption patterns that generates demands for mineral exploitation founded on unending pursuit of profits. This also opens up wider possibilities connection making processes across the globe breaking number existing hierarchies of gender, class, caste, creed and issue based practices of movements at various levels.

Keywords

social movements; mining; Metal Sensitivity; Pedagogy

1 Introduction

1.1 The rat race in the economic activities that has come to be known as the growth orientated economies has severe repercussions to the life support systems on the planet. The nexus between the economic players such as Corporate and State has not only caused immense and even irreversible effects on fragile ecosystems but also in many cases even militarized the process of mineral extraction due to intense resistance on ground. India represents this reality in very stark manner.

1.2 On the one hand there are polarized situations between the State and Societies on the other hand there is transfer of mineral wealth from India to China, Japan, Europe and United States either directly or indirectly. This is also the case with the tiny State of Goa on the west coast of India with regard to iron ore mining, resistance and repression.

1.3 Various parts of the world has been historically witnessed numerous and intense resistance towards mining of various minerals due to wide range of reasons that includes social, political, cultural, health, economical and ecological. Largely the discourse around resistance covers the negative impacts on the communities directly affected by the mining projects. 'Metal Sensitivity' is missed from the discourse and this paper argues for its inclusion in practice and discourse.

1.4 Although at the source of mineral extraction there stiff resistance movements they very often lack sensitivity towards the chain of usage of the metals that has its veins in powerful consuming classes of the world. This situation very often caps the huge potential for the widening of the horizons of the communities in the resistance at source of underground as well as open cast mining of various mineral.

1.5 Movements - often functioning in 'fire brigade' mode - neglect this crucial dimension. The result is that consequences are either 'success' stories or stories of 'combat'. The 'success' stories are those wherein the mining proposals are stalled or at least temporarily halted due to movements ability to put spoke in the political system. Mining interests however do not die, and system very often 'upgrades' itself and strikes back again after the gap of few months or few years. While system takes time to 'upgrade' itself, movements in the meanwhile are left with no agenda to pursue mobilization programs till mining project re-emerges as 'visible enemy' again. While those in combat mode flows from one 'victory' to another or one 'setback' to another or from 'setback' to 'victory and vice versa.

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2 Aiming de-growth

2.1 The logic of growth model of development has fuelled and continuously aggravated the climate crisis. The ideology of this model of development is single most factor of disruption of life and life support system in terms of mining in Goa. The important characteristic of this feature is that this model of development is embarked upon by States that espouse capitalist ideology like USA, Europe and Japan, countries that espoused communist ideology like that of China and Countries that experimented with mixed economies such as India. In fact the countries and their varied ideologies have reduced themselves

into a mere subset of growth model of development. The repeated recessions has signaled the nemesis of the system world wide and the global economy carries on this model of economy through intense and violent integration of wider and newer areas into the chains of servitude in global political economy – production, distribution, consumption and exchange. Goa is witnessing itself in powerful assertive impulse.

2.2 There is a need to undertake re-look at this growth led development model, introspect on it and get into the process of dismantling it. There is a need for powerful and sustain action at the global as well as local levels in this regard. Power of de-growth option will emerge from consistent organization, reflection, evaluation and action on behalf of the mass of people at different levels in coordination with each other. This process that needs to be followed for this is bottom-up approach in organizing with ever deepening clarity of thought and vision.

2.3 One element that may be deliberately excluded from this action is violence. This is particularly because the growth model in place uses it so carefully to silence dissenters in ways more than one. It is not possible to embark on creating new models of sustainability based on violence as violence is source as well as model of unsustainability that is so integral part of growth model of development.

2.4 There is a need to set up small decentralized de-growth groups all over the state of Goa and beyond for both in order to provoke puncturing of growth model as well as establishing new models of sustainability. These groups must be formed as coalitions of various resistance movements so that they are able connect with consumption and distribution side of the political economy. Establishing these crisp cross linkages will serve as lifeline for dismantling the growth model as well for the evolution of new models with new paradigms and parameters.

2.5 The entire State of Goa from the grass roots level must be involved in this process cutting across the all human created barriers. If setting up of groups are not possible then the theme of de-growth must be pushed on the various platforms to promote wider dissemination of ideas and generation of quality debates serving as grinders for action and advancement.

2.6 De-growth has to not only be spread as idea – a radical critique of the prevalent system represented by growth model but also must take grip as pedagogy – actual practice of de-growth and rise of economy based on sustainability. This will have be patience project that far exceeds the narrow agendas of any kind of sectarian interests.

2.7 The involvement of large number of people in this project will get more minds searching the ways out to dismantle growth model of development as well as creating social infrastructure for the rise of self-dependent sustainable society. Important aspect of this whole endeavor is to take the debate out of the boardrooms of narrow circuits of researchers and get it tested with mass of people out in the open, in spaces and places where collective discussions are practiced. It may be on the streets, on village groups working on democracy, workers collective bargaining for their wages, urban groups of poor fighting for their share of water and food, middle class consumer rights groups demanding efficiency of delivery of gas cylinders at home, women organized to counter male domination, concerned teachers organizing themselves to infuse quality values in their students, student organizations who believe they have a duty towards their country, Members of political parties eager to do public service, Clergy groupings wanting to serve society with motivations from their respective religions, Groups farmers organized into the club, enterprising women that are part of self-help groups. All needs to be included. Greater the inclusion, better and effective it is for the growth model functions with exclusion of the majority. To dismantle this model first thing that is required is inclusion of the majority to evolve sustainable model that rescues society, polity, economy and ecology from crisis, and further go about to build a self-sustaining economy.

2.8 So the ‘crisis out there’, after deeper introspection becomes ‘crisis in here’. So the remedy for wider society and polity is also remedy for ones deep and intimate self. There is no dichotomy involved. Personal changes are outcomes of deeper reflections on wider issues. They look insignificant for non-sensitive audience. Sensitivity is the key. Personal reflections do away with dichotomies and the quality of

vibrations oozing out from deeper self become purer with every action of introspection. It is a seed of de-growth. It is there in all of us. Point is whether we are willing to slow down and let it germinate.

2.8.1 Personal reflection then has to spread beyond oneself to others around in society. There is need for de-growth discussion to expand - at the pace of its own - into collective reflections. Collective reflections derive their strength from personal reflections and vice versa. This pattern has to proceed in the method of repeat of self-similarity in non-linear manner. The growth patterns are linear. Degrowth patterns has to be imagined as non-linear in their essence.

3 Metal Sensitivity – need for sustainable futures¹

3.1 While there has been a large amount of disruption of life and life supporting systems due to rampant mining activities, the aspect of consumption pattern - particularly of metals - has remained largely unaddressed amongst the milieu seeking to do way with anti-sustainable development patterns in operation. The daily routine of battle largely kept theoretical understanding of countering the exploitative process at the source of mining activities *viz.* stopping the operation of mines, campaigning against police repression on protestors etc something that is so necessary too.

3.2 However, those who are the consumers of the products from the mined minerals such as Iron Ore, Magnesium, Bauxite, Gold, Copper and all other types of minerals, are never questioned. There are multiple classes of people that are involved in conspicuous consumption of the products of the mined products for various reasons such as statement of a class, fashion, luxury and also as psychopathic greed. Today and also earlier it has been a practice to own jewelry – gold, diamond and silver etc – as a symbol of wealth. Possessions of these metals constitutes ‘security’ to some, status symbol to some, statement of class to still others, fashion to the well off classes, etc. There is need for radical need to question these consuming classes. There is need to reflect as to amount of mining is needed to carry on to make these fine products as class statements.

3.3 Consumption of Costly cars is another fad of the burgeoning global middle that is growing in leaps and bound India as well as in China. One peculiar habit of this class of people is to buy cars. After one car there is a trend to go for second and third cars. Amount of Iron Ore that gets concentrated in manufacture of these cars is not only enormous ecological scandal but also huge burden on the people in the mining global mining belts battling mining companies and State repressive mechanisms. The link needs to be strongly built between the consuming classes of the World and the mining companies-State nexus. This consumption pattern spearheaded by upper and middle classes also needs to be targeted in development related resistance discourse in theory as well as systematic practical application to address uncalled for irrational burden of car consumption by consuming classes. It is much wiser to divert the precious metal in improving Public transportation rather than promote through state patronage individual car consumption.

3.4 There is also need to be sensitive towards various daily use gadgets made up of metals and dependent upon electricity that is rapidly finding its ways in consumption patterns. Metal gadgets are entering the household consumption agendas in the same way that plastic entered household agendas by destroying India’s well known mud pottery in front of the onslaught of plastic industry. Large amount and variety of mineral are utilized for the manufacture of computers that has also already become household item in middle classes and upper middle classes. Communication systems that are evolving such as e-mail and World Wide Web is largely dependent upon for their applicability on metal consuming gadgets such as computers and mobile phones with economics of profitability being its driving force of their promotion. Evolution in communications technology has even evolved a term called ‘personal computer (PC)’ as one of the very basic concept in its functioning and appeal. The underlying message that one can derive is the

¹ Rodrigues, Sebastian (2009) “Mining and Displacement of Sustainable Livelihoods in Goa, India” in Ulvila, Marko and Panasen, Jarna (eds) Sustainable Futures: Replacing Growth Imperative and Hierarchies with Sustainable Ways published by Ministry of Foreign Affairs of Finland.

computer for personal use. The term 'Personal' is distinctly different from 'Family', 'Neighbourhood' and of 'Village'. The nature and ideology of these technological gadgets are reflected in their nomenclature itself. It targets individual and then transform and individual into consumer.

3.5 Construction industry uses huge amount of metal in the process. Moreover the construction as an industry – also known as real estate industry has transformed itself into profit driven industry. It is engaged in the project of housing and luxury hotel projects that are for the consumption of high spending upper and middle classes. There is a need for critical question on the entire matrix of Construction industry. There is a need to understand the magnitude of metal consumption at various levels by this industry.

3.6 There is also need to be metal sensitive when it comes to global war industry. The triple humiliating aspect of this industry is that first, it is an industry that is designed to kill human being in variety of ways, secondly, it is one of the largest consumers of metals and thereby ensures steady demand for ore and profitability of the mining industry. Thirdly, it is principally and legitimately financed through public funding by various state agencies. Consent is manufactured to legitimize this industry in the name of law and order and nationalism. Military agencies that includes Army, Navy and Air force of various individual countries as well as international agencies such as NATO, use large amount of metals for their various consumption needs such as trucks, tankers, ships, guns, bullets, protective gears, missiles, various kinds of ammunitions etc. Numbers of States are responsible for creation and promotion of non-state actors to engage in violence so that war industry continuously floats in profits through various kinds of conflicts all over the world. Peace and understanding is essentially valid option in the interest of sustainable future so that abuse of metals by war industry can be restricted. The metal sensitivity in war industry is all the more needed here due to one additional reason too. Number of countries has been considering nuclear option in war. This has led to creation of large networks of nuclear mines, nuclear plants, Military and Science. It is almost a nexus as the nuclear industry has managed to get itself state protection in number of countries and lage amount of public funding is directed towards building steady supply lines and utmost preparedness for nuclear attacks on so-called enemy country. This has been the phenomena especially after the Second World War when USA dropped couple of atom bombs on Japan in August 1945. According to Meher Engineer² total estimate of annual bullet production in the world stands at 16 billion bullets.

3.7 Even independent of war industry nuclear industry must be targeted even for civilian purposes. Nuclear mining is one of the most dangerous mining industries causing radioactive hazards. The worst case of nuclear mining in India is in Jharkhand's Jadugoda Uranium mines. Due to passing of Indo-US nuclear deal, numbers of nuclear reactors that are facing opposition from conscious consumers of electricity in the West – Europe, America and Australia - are all set to relocate themselves in India. Couple new uranium mining sites are also getting cleared in spite of the opposition in Meghalaya and Andhra Pradesh States of India. Few sites are identified for nuclear reactors in number of Indian States including Maharastra. The State of Goa is going to be sandwiched between the two nuclear reactors – one to the South: Kaiga nuclear plant in Karnataka and one to the North : Ratnagiri in Maharastra.

3.8 Metal sensitivity is largely being able to be aware of once choices of consumption, one being able to critique and reflect on prevailing pattern of consumption related to metals, being able to reach out and connect with consuming classes and begin process of honest and frank communication, being able to decipher between need based consumption and greed based consumption, being able to willing to make serious effort to search for alternatives and challenge the profit based metal consumption to be replaced by need based metal consumption. To be able to connect loss of livelihood of the indigenous communities in Goa, Jharkhand, Orissa and other places in India, Philippines, Bolivia, East Timor and mines in other parts of the World to global consumption patterns based on overexploitation. It also means being able to disconnect with metal industry and connect with real people and community. It means being able to arrive at inner peace within an individual without greedy consumption of metals in various forms. It also means being able to find safer alternatives to nuclear power plants for electricity consumption. It also means serious re-thinking on our aspirations of life styles being more metal sensitive. Most importantly it means

² Meher Engineer at Indian Social Social Science Congress, Hyderabad in March 2010.

unlearning models of consumption based on greed. It means being willing to learn from various indigenous communities the models of life that is based on non-exploitative terms and integrating them into mainstream. It also means able to apply various societal and state agencies to influence metal sensitive development initiatives and alter existing consumption patterns that are leading the planet towards catastrophes such as nuclear radiation, industrial disasters and climate change. All the three looming catastrophes are caused by industrialization.

3.9 Non-industrial low ecological foot print communities such as Adivasi communities provide important lessons in peace, community spirit and non metal consumption pattern that have potentials for clues of solutions for greed based over consumption patterns. Metal sensitivity also means defending these communities. These communities have inhabited the planet and also used metals in most sensible and non exploitative manner towards nature as well as to human communities. It is only modern organized societies that are intensely involved in creating unsustainable future ever since industrial revolution for the past three centuries.

4 Crisis of ecology as crisis of polity

4.1 The most direct unfolding crisis of ecology is the brutal assault of industry over the western ghats forest in Goa. The forest is well known and often cited as one of the dozen bio-diversity hotspots in the world. These Sahayadri range of mountains range from southern Gujarat, Maharashtra, Goa, Karnataka, Tamilnadu and Kerala. Sri Lanka too is often considered as extension of Western Ghats. Forest and Mining concessions/leases intersect each other in highly dangerous manner in the State of Goa. 825 mining leases granted during Portuguese colonial rule that lasted till 1961 retained its foundational structure after Indian State instead of canceling these mining leases legitimized them with fresh legislations thus making mockery of liberation of Goa as well as spelling doom for ecological status of Western ghats that covers forest area in Goa.

4.2 It may be of some interest to place these statistics with wider statistical context in terms of State of Goa. The total geographic area is 3702 square kilometers. It has totally 825 mining leases all granted during Portuguese Colonial times that covers 67,822 hectares.

4.3 This is clearly an indication of how dangerous situation Goa is rapidly descending into. The dangerous situation emanates from the fact that first casualty of mining activity is water. Water is something so special on this planet earth that is fundamentally responsible to support life in its innumerable and varied forms. Mining attacks and brutalizes this very foundation of life. This then creates irreversible changes in terms of forest, agriculture, wildlife, character of soil structure, human habitat, birds and animal migration patterns, temperature of the locality, course and depth of water bodies including flowing rivers and myriad other changes. The crisis in ecology surmounts one and all.

4.4 The ecological crises however are just not unfolding due to natural occurrences in nature although this too is the case. Mining of minerals fundamentally triggers the crisis in polity. It begins from the tagging of minerals underground as “resources”. This reference is very widely prevalent and has inherent inbuilt aggression. It robs the values of minerals for the sake of them where they are located and their role in shaping the locality and wider surrounding in the way it is. The word “resources” also injects a value loaded idea towards the mineral deposits. It values the minerals for their use value not as they existed for millions of years underground but as in terms of its use value for industry. The value is then calculated in monetary terms.

4.5 This is visibly very clear in case of Goa. Open cast mining industry dealing with Iron Ore, Manganese and Bauxite has its prevalence in Goa since 1948 when 100 tonnes of Iron Ore was exported to Japan for the first time, from the times under Portuguese Colonial rule. The industry is basically dig and sell economy located in around 68,000 hectares of land fragmented into 791 mining leases granted during Portuguese colonial regime. Open cast mining of this major industry is principally for export purpose to

various countries of the World with Japan being the prominent destination since 1948. In fact Goa's Ore played major role in resurgence of Japan after being reduced to ashes during the World War II that culminated in dropping of Atom bombs by Americans on Japanese cities of Hiroshima and Nagasaki in August 1945. However China overtook Japan as a leading destination of Goa's mineral exports during past few years. In fact during 2008-2009 Goan exports of ore to China constituted 86% (32,763,721 tonnes) while next to follow is Japan with 9% (3,557,775 tonnes). Europe (Italy, Netherlands and Rumania) got 2% of Goa's iron ore exports (680,513 tonnes).

4.6 According to the selected statistics (Amended upto March 31, 2009) on Goan Mineral Ore Exports Compiled by Goa Mineral Ore Exporters' Association Goa's exports particularly of Iron Ore has been increasing at rapid pace. During 2005-2006 it was 25,537,924 tonnes, In 2006-2007 it rose to 30,893,953 tonnes. In 2007-2008 it increased to 33,434,429 tonnes. In 2008-2009 exports jumped to 38,075,223 tonnes out of which 32,629,521 tonnes is to China alone.

4.7 Mining companies involved in Goan Iron Ore exports during 2008-2009 includes miners, transporters and real estate companies. The list is as follows: Sesa Goa Limited, V.S. Dempo & Company Pvt. Ltd., Sociedade de Fomento Indl. P. Ltd., Prime Mineral Exports Pvt. Ltd., Fomento (Karnataka) Mining Co. P. Ltd., V.M. Salgaoncar & Bro. Pvt. Ltd. All these companies has exported Goan Iron Ore to China without any exception. These are the beneficiaries of the Goa's dig and sell economy to which this trade is the backbone of their economies fetching unimaginable financial rewards without being in any affecting with global depression.

4.8 Sesa Goa limited – owned by British corporate Vedanta that is listed on London stock exchange and funded by large number of banks and shareholders world over - has topped the list of exporters with total of 10,345,020 tonnes of export of Iron Ore. Out this 8,977,723 tonnes exported to China, 631,186 tonnes exported to Japan, 212,378 tonnes to South Korea, 265,704 to Europe, and 258,029 tonnes to Pakistan. The company – V.S. Dempo & Company Pvt. Ltd – that Vedanta purchased in June 2009 with all its mining interests in Goa exported total of 4,347,543 tonnes of iron ore to China (3,882,550 tonnes) and Japan (464,993 tonnes). Vedanta's target of exports for 2009-2010 is whopping 50,000,000 tonnes from its mines in Goa alone. This is larger than last year's (2008-2009) combined total of all the mining companies export from Goa of 38,075,223 tonnes of iron ore. For Vedanta Goa is a Sunshine State! With this known target of one mining company alone destruction of Goa's ecology and People's livelihood is guaranteed.

4.9 Audoot Timblo who filed defamation suit of Rs.500 crore against the author of this paper – Sebastiao Rodrigues - at Calcutta High Court in December 2008 citing that his writings at GAKUVED blog www.mandgoa.blogspot.com has caused loss of business and existence of Fomento group is in danger if his writings continues has three mining companies in his kitty. The first one is Sociedade de Fomento Indl P. ltd that exported 2,348,970 tonnes to China (3,882,550 tonnes), Japan (453,005 tonnes) and Europe (339,330 tonnes). The second one is Prime Mineral Exports Pvt. Ltd. That exported 1,644,432 tonnes of Iron Ore to China. The third one is Fomento (Karnataka) Mining Co. P. Ltd that sent 119,964 of Goan ore to China. This way there are 50 agencies that are engaged in export of Goa's Iron Ore. Their names are already cited above.

4.10 In order to sustain this exports tirade Goa's hinterlands has been at the brutal receiving ends. Its Forest and agriculture in large number of villages where open cast mining activity is undertaken has been a huge casualty thereby causing crisis of food security for humans and animals alike. Goa's ground water flow has been drastically changed due to deep mining pits in number of locations thereby leaving village wells, natural lakes, springs, ponds and rivulets dry. Water dependency has developed in the Goa's mining belt. Number of people has become victims of dangerous Public Health Crisis in the Goa's mining belt that is yet to be thoroughly investigated. Large number of people of Pissurlem and Keri – in Sattari are suffering from number lung diseases including tuberculosis. While People in and around Rivona in Sanguem suffer from Chicken Gunia almost in epidemic form few months ago in September – October 2009.

4.11 Number of voices has cropped up recently highlighting that all is not well with open cast mining

industry in Goa and in fact it is rapidly destroying not only the backbone of the local people's economy i.e. agriculture, but also causing irreversible ecological changes with long term unforeseen consequences. Due to inherent rush of the China boom and lure of foreign currency mining companies are in competition with each other to transform Goa into a desert – all of them working at breath neck speed. This is duly facilitated by mechanized nature of the mining industry with latest sophisticated machinery waging a war against nature and humanity in Goa. Communities has been lured into alcoholism and cleverly fragmented into factions causing frequent strife so that the will of the mining industry prevails.”³ Clearly crisis in polity is visible.

5 Crisis of Economy

5.1 It is clear that crisis in ecology and crisis in polity are increasingly manifesting itself on the theatre of economy. Economy in both the macro as well as micro sense. At macro level massive beneficiaries has been the mining companies. Their incomes from mining in Goa are several time higher than income of the State of Goa. The by itself is a crisis. How come the wealth generated from the ore in the State of Goa gets distributed in such a scandalous manner? The ecological exploitation has created economic power houses that are unhealthy for society as this has generated power relations based of acute inequality. The existence of inequality is the visible sign of crisis of economy.

5.2 At a micro level employment in terms of trucks for villagers has created a arrogant lobby arguing for the mining industry. Their logic is driven by crisis of economy. Their most often repeated argument on the streets with the protestor is that they have taken loans to buy trucks. And in order to pay loans they need to keep their trucks employed with mining companies. Or if protestors feel that they should stop mining transportation then the protestors must pay the loans of the trucks to the banks. The role of banks as large scale behind the curtain beneficiary becomes evident here. The long term interests of sustenance of the life support systems that are rooted in ecology are carefully overlooked.

5.3 Humanity suffers at this juncture suffer another major division. Climate crisis often referred as caused by human action. But the major chunk of crisis has been driven by the business houses and the industry. This is also the case of Goa. Mining companies are tiny section of humanity in terms of numbers. Yet they are able to caused massive perturbations across the board – in ecology, in economy and in polity. This section of humanity has gathered lots of power by virtue of their scandalous accumulation of wealth, influence over polity and control over media. This is a case of Goa too.

6 Overcoming crisis

6.1 One of the formidable challenges today has been to overcome the crisis in ecology, crisis in polity as well as crisis in economy. The fundamental paradigms shifts are necessary in the way the life is approached. Not just the life of human species but essential understanding of life support systems on wider canvass. The idea that human species is superior to all other species has to be questioned as human species cannot survive alone by itself. It needs all the known and unknown forces of universe to make itself viable on earth. The idea that human beings – particularly those who uphold private ownership of nature ideology is essentially defective. In fact this is a crisis of understanding that is fuelled by greed and insecurity. This situation gets aggravated when these mindset people takes control of the State and begin to further re-enforce this ideology with State apparatus that includes monopoly over instruments, agencies and justifications for violence. This has largely been the case of Goa in terms of the way it has transformed over the past 80 years. Mining leases legally disposed all other legal titles of people to their

³ Rodrigues, Sebastian (2010) “Goa Police as an agency of repression 2007-2009” presented at the State level Seminar on “Human Rights and Environment – A Focus on Goa” at the Department of Political Science, St. Xavier’s College, Mapusa, Goa on International Human Rights Day December 10, 2009.

land and once leases activated it in practice deprived people including tribal people of Goa. The resistance was met with brute force. The entire edifice of resistance has to undergo drastic and radical change.

7 Conclusion

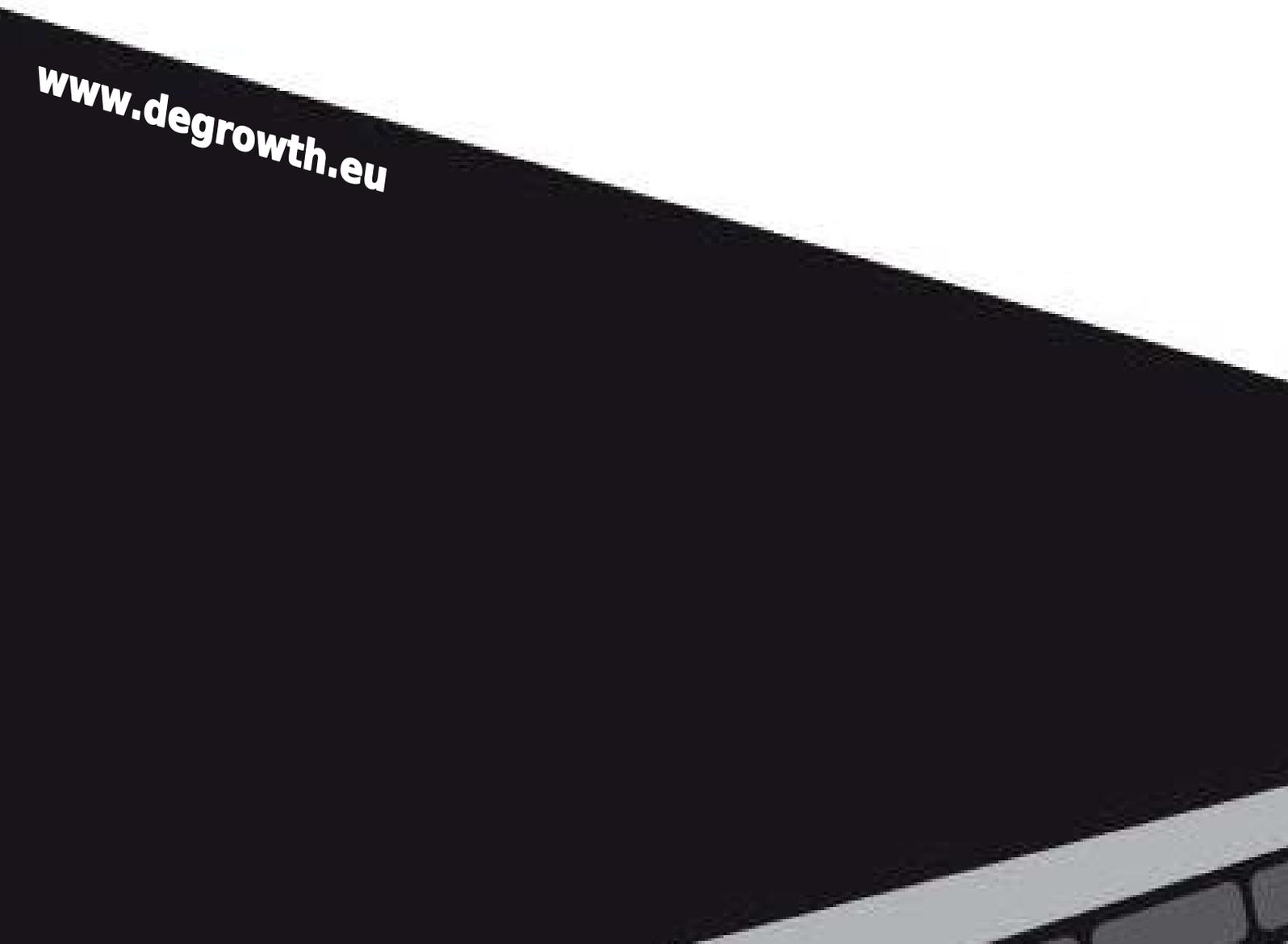
7.1 It is of immense necessity for Social Movements to include 'Metal Sensitivity' as pedagogic necessity as it opens up wider linkages and exposes wider chains of metal consumption from the source of mining of ore to the destination of exports, from the manufacturing cycle to consumption patterns of minerals. The costs, not just economic but also ecological are then possible to view in new light based on the hints derived from chain tracking of minerals once extracted from the earth. The direction of campaigns launched by the social movements then does not merely restrict itself only to local resistance site but crosses boundaries – national and even international – in terms of perspective. This particularly the case of form political economy in place where in global consumer classes have extended their varied forms of extraction to far and wide places and spaces in the world.

7.2 'Metal Sensitivity' in this respect is just not a knowledge about patterns of mineral transfer and consumption routes worldwide or science of metal extraction but also very important provocation to be sensitive to the entire process of extraction, consumption and its patterns. This is a qualitative leap for people involved in resistance to mining industry in Goa, India and elsewhere. 'Metal Sensitivity' is therefore pedagogic necessity for social movements.



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