Indian Mining Exchange

Issue Four, 5th September 2011

Article One

A Good Looking Empty Shell: The New Land Acquisition and Resettlement and Rehabilitation Bill

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The new draft Land Acquisition and Resettlement and Rehabilitation Bill, announced by the Ministry of Rural Development, is a classic example of **a law that looks good on paper but that will produce a very different result.** This is true not only because of internal flaws or drafting mistakes, but because of its very character and spirit.

Most commentators have been relying on the introductory material produced by the Ministry without reading the Bill itself; but a close reading of the Bill shows that the reality is different from what is being presented. In a few cases the presentation says things that are not in the Bill at all, while in most cases the law contains far more loopholes and dangers than the presentation reflects.

The major problems in land acquisition today include the following:

1. Profiteering by private interests taking advantage of government acquisition (e.g. NOIDA, Bhatta Parsaul);
2. Non-existent or inadequate rehabilitation and compensation for displaced people;
3. Affected people have no recourse for enforcing their rights, which are often ignored both during land takeover (e.g. POSCO) and during rehabilitation;
4. As the central cause for all of the above, a decision-making process that is totally controlled by government officials, with no democratic or public involvement.

How will the draft Bill in this form respond to these problems? The short answer is: Problem 1 - contrary to what is being projected, this will probably get worse.

Problem 2 - with the exception of increased compensation for some, this may not change a great deal.

Problem 3 - Recourse will in fact become more difficult.

Problem 4 - The decision making process, despite some gestures towards change, will remain entirely state-controlled.

In short, the draft Bill will not significantly improve things and may make them worse. Public purpose has been so widely defined, and then so many loopholes provided, that

there are ways to get around the supposed safeguards. The only two real positive measures are 1) the restrictions on invoking "urgency" and 2) the increased compensation for some landowners. However, increased compensation will not address most of the existing conflicts, and in any case the compensation will still be below what may actually be just.

Below we explore some of the major issues (we have not included all points here). We present some alternatives at the end.

Consulting People and Taking Their Consent for Projects

This Bill will supposedly open the process of decision making on projects to public input. In particular, the most significant stated advance is that 80% of the affected people have to consent for acquisition for a private company.

But **the Bill contains so many loopholes that it will be very easy for almost any project to get around the 80% consent clause.**

Witness the following:

- Section 1(2)(b), to which the 80% clause does not apply, permits the government to engage in "partial" acquisition of land for a private party. The term "partial" is not defined. So if a private party acquires 100 acres and asks the government to acquire 3000 acres, 80% consent is not required, so long as the project is for "industrialisation or urbanisation" (a public purpose under s. 2(y)(ii)) and can be considered a project of the government. Even the area to be acquired is decided by the private company (as implied by proviso to s. 1A(2)). All such projects, it should be remembered, are typically pursued as part of one or the other government scheme or plan. More importantly, many private infrastructure projects are done under "Build Operate Transfer" contracts, under which - after a period of 30 or 50 years - the government is supposed to receive full ownership. But in the interim the private company makes all the profits it wishes.
- Suppose the private party wants the government to acquire the entire land. Then, section 1A(1)(a) permits the government to acquire land for "its own use, to hold and to control" without taking 80% consent; crucially, it also permits the government to later change the public purpose. The way the section is phrased, what matters is the *intent* of the government at the time of acquisition. Therefore, all that is required is a notification that states the government is acquiring the land for its use and control for purposes of industrialisation / urbanisation (a public purpose under 2(y)(ii)); then there's no need for 80% consent. Then, since the public purpose can be changed, the government merely declares that it has changed its mind later and transfers to a private party (contrary to what the presentation says, the Bill nowhere states that transfer can only happen between government departments). This can of course be challenged in court, but the burden comes on the person who is making the challenge to prove what the actual intent of the government was.
- Finally, as happens routinely today, the law provides enough space for someone to simply break it. Who decides if a project has got 80% consent? How, in fact, is this "consent" to be taken? There is no procedure for obtaining the consent in the law

itself. Indeed, as per section 7, 80% consent has to be "ascertained" (not obtained) by the Chief Secretary's committee - implying that it may well be the private developer who will be obtaining the "consent." Even if that is not the case, such a committee is totally unaccountable, and it can easily lie or accept forgeries (this has happened in several cases where consultation was required under PESA, including Polavaram and Nagarnar).

Aside from the 80% consent clause, there is supposed to be a social impact and public hearing process, which is advertised as another step forward for transparency and checking if projects are actually beneficial. Consider:

- The entire SIA process is modelled on the Environment Impact Assessment process, which the current Minister Jairam Ramesh described - as the then Environment Minister - as a "farce", with almost 99% of projects receiving approval. The reason was that the assessment process was done by private parties and decided by a centralised body with no time to check facts. This mechanism is almost identical.
- The law says nothing about who will do the Social Impact Assessment and how.
- There is a public hearing required by section 4; but the results of this hearing are never mentioned. What happens if people object? What happens if most oppose? Who is accountable for deciding on these objections and who will answer for them? Under this draft, no one.
- At three different places, the law says "gram sabhas will be consulted." What happens if they object? There is no procedure.
- The decision on whether a project is a public purpose will be taken by a Chief Secretary's committee consisting almost entirely of serving State-level government officers. In what way is this different from the current procedure, where this decision is made by the State government?

In short, most of the provisions for public consultation amount to essentially formalities, without any impact on the final decision. The final decision making is done by the same people who do it at present, with or without any additional inputs.

Will R&R Actually Happen Alongside Land Acquisition?

The second claim to fame is the idea that land acquisition and R&R will be "integrated." But this is also far from the truth. In particular, note that:

- Both the presentation and the Bill state that the R&R package will not even be drafted until after the acquisition process is set underway. People are expected to assess the impact of the project (social impact assessment), give objections to the impact assessment, object or accept the supposed public purpose being served, etc. - all without knowing what kind of rehabilitation is to be done. Would this not be the first question asked of them?
- Can land be taken before R&R is complete? Presentation and section 29(3) say no; section 53 says land can be taken before compensation is paid, so long as interest is added. Even s. 29 leaves it to the Collector to decide when rehab is complete.

As for "integration", consider what the Bill actually does:

- the number of affected / interested people will be determined sep any land acquisition and rehabilitation law arately three times (s. 3 for SIA; s. 11(2) for acquisition; s. 12(1) for R&R), without any mechanism for deciding which is correct;
- there are three separate public hearings / invitations for objections to be held at various times, none of which feed into each other, and none of which can lead to the cancellation of the project;
- There is an R&R committee (s. 33) with various people on it whose sole job, as per the law's terms at least, is to sit with the Collector once and review the proposed R&R package (s. 13(1));
- The Act contains no provisions for enforcement of the R&R package or for its monitoring and grievance redressal during implementation (this in a situation where the biggest complaint about R&R is that it is simply not done as promised). The seriousness of monitoring can be taken from the fact that, once again, there is no monitoring process, and instead three separate authorities are all given the same responsibility for monitoring R&R (the Administrator under 31(3); the Commissioner under 32(2); the R&R Committee under 33(1)), an arrangement that by definition will fail.
- The dispute settlement authority that is supposed to settle all disputes under the Act, including R&R (s. 38(1)), is only empowered to give orders on compensation (s. 44); it cannot direct any authority to do anything, nor can it change the R&R package in any way.

The result in practice will be that R&R will not occur and affected people with sufficient support will be sent into PILs and endless court battles; those without will be left with nothing. This is just what happens at present.

Can People Actually Enforce the Positive Provisions of this Law?

Having provided this confused mass of loopholes and complex provisions, the law finally lets people down on the question of enforcement. Witness the following:

- Anyone with a dispute cannot approach a civil court; they have to go to a Dispute Settlement Authority in the State capital, or, in case of Central projects, in Delhi. Is this feasible for most project affected people?
- Moreover, no one can approach the authority directly; they have to get a reference from the Collector (s. 38), the very person against whom they are most likely complaining.
- The dispute settlement authority is only given the power to award compensation, as noted above, and not to direct any authority to do anything or to change the R&R package.
- A government official who violates any provision of the Act is at most punishable by disciplinary action (s.58(3)), which is already the case, and which is entirely controlled by the concerned government.

The effectiveness of such a system can be imagined.

Tribals and Forest Dwellers

The Minister's presentation states that the Bill will be in compliance with the Forest Rights Act and the Panchayats (Extension to Scheduled Areas) Act. Yet, despite lip service, this Bill complies with neither.

Forest dwellers are covered as "interested parties", but they are not merely "interested persons" but rights holders with particular rights and powers - in particular over natural and forest resources. This Act treats them as if their rights can simply be taken over in exchange for a fixed R&R package, when:

1. the range of rights extends to such rights as grazing areas, water bodies, habitats of "primitive tribal groups", ownership of minor forest produce, etc., which cannot be simply be compensated or replaced, and which require a different procedure; and
2. more importantly, the Act ignores the powers of forest dwellers to decide on use and protection of forests, under which the decision to create the project in the first place requires their consent.

As for the PESA Act, excepting some ritualistic statements to the effect that "gram sabhas will be consulted", there is nothing in the Bill. This is meaningless when the law does not say by whom, in what manner, and with what result these consultations will be done. Further, as said above, the key question is what happens when gram sabhas object; but the Bill assumes this will never happen, defeating the entire purpose of consultation.

Alternatives and Demands

How can such a mess be avoided? The need is to go back to the purpose of land acquisition is in the first place. The only way such acquisition can be justified in a democratic society is if it is 1) in accordance with the overall social goals of that society and 2) decided by a democratic process. More details on this alternative will be presented later, but at present, we reiterate that this process has to have the following basic features:

1. *A democratically decided land use plan:* Without an overall land use and development plan, decided from the level of the village up to the State and decided in a democratic manner, such acquisition will continue to be destructive and exploitative.
2. *Any significant change in land use should require resettlement and rehabilitation and a demonstration of public purpose being achieved:* This would cover both private parties and the government.
3. *A democratic process of deciding on whether any change of land use achieves a public purpose:* This should be through an open process of public decision making from the gram sabha level upwards.
4. *The consent of the gram sabha to any major change in land use:* Finally, the consent of the village assembly should be required.

In the absence of this basic procedure, the current problems are likely to continue.

Article Two

Right to food

By: Right to Food Campaign - **EPW** - Vol XLVI No.33 August 13, 2011

A critique of the draft food security bill, and a brief outline of what any such bill must, at the very least, incorporate.

This is an open letter to Prime Minister Manmohan Singh and his council of ministers.

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As you are aware, the Empowered Group of Ministers (EGoM) has recently approved the Department of Food and Consumer Affairs draft of the National Food Security Bill (NFSB) and the government claims that it is now ready to be placed before the cabinet. This draft bill makes a complete mockery of the idea of food security for all and dilutes even existing entitlements obtained through the Supreme Court. It was expected from the aam admi United Progressive Alliance sarkar that it will increase investment in the schemes related to food security, in order to reduce the unacceptably high rates of malnutrition and hunger in India. Instead what we get is a draft which minimises government's obligations, restricts people's entitlements and is devoid of any accountability. The bill interprets food security only as distribution of cereals and cooked meals and is completely silent on pulses, millets and oil. As in the earlier EGoM draft of March 2010, there is no commitment towards nutritional security or to see production, procurement (including local procurement), storage and distribution as an integrated process in order to address issues of food and nutritional security.

We reject this farce of a bill and demand that the government sincerely acts towards alleviating hunger and malnutrition in the country.

Whittling Down Coverage

In spite of overwhelming evidence showing the failure of the below-the-poverty-line (BPL) approach, the draft bill continues to make a differentiation between those above and below the poverty line. The poverty line itself is too low and does not represent the extent of hunger in the country. The problems related to identification and exclusion errors are well known. The draft bill not only links the entitlements to the poverty ratios, but also further dilutes what was even suggested by the National Advisory Council (NAC). While the NAC proposed 90% coverage of the rural population, the government has reduced it to 75%. Further, while the NAC proposed 4 kg per head for those in the "general" category, the government's bill reduces it to 3 kg per head. What is even more dangerous is that by specifying that the division between "priority" and "general" categories will be based on "poverty ratios", the bill has paved the way for the coverage of "priority" groups to shrink over time. Also, the provision of food grains to the general category at half the minimum support price (MSP) will mean that people in this category will have to pay prices which are much higher than the present BPL prices and APL prices in the long run.

Defend PDS

The Right to Food Campaign strongly opposes the dismantling of the public distribution system (PDS) and its replacement with cash transfers. The draft bill not only gives the government unlimited powers to provide a "food security allowance" in cash in lieu of PDS entitlements, it also makes it mandatory (under the "Provisions for Advancing Food Security") for the government to "strive for... introducing (the) scheme of cash transfers in lieu of entitlements". These provisions are opening the door to a wholesale replacement of the PDS with cash transfers, without any safeguards. As argued in a recent letter addressed to you by a group of students and research scholars (EPW, 23 July 2011), based on a recent survey, this would be very dangerous. In this respect, the draft bill is an unprecedented attack on food security.

It is our belief that the introduction of cash transfers in place of the PDS will not just affect household food security but also affect production, procurement and storage systems. Those affected the most will be the farmers since the government will not procure grain as it will not need to run the PDS shops. The farmers will not get their MSP which is currently their biggest incentive to grow cereals. They will also be left to the market to sell their grains, which they may have to do at low prices. The Food Corporation of India (FCI) godowns will not be required and the FCI, in the long run, will be left as a completely skeletal system. This will lead to the end of the nation's food security.

The Right to Food Campaign apprehends that the dismantling of the PDS is being done deliberately to pave the way for the entry of organised retail into the country. Giving cash without ensuring proper food availability is putting people at the mercy of food retailer sharks and cartels. We see the replacement of food grains with cash in conjunction with the decision of your government to raise the foreign direct investment limit for international capital in the retail business. This could lead to a bigger retail corruption than the supposed leakages in the PDS, apart from putting farmers at risk.

The draft directs the government to strive for "leveraging Aadhaar for unique identification" which the Campaign is opposed to, as it will impinge on the civil liberties of the country's residents and is a means for tracking and surveillance. Incidentally, the UID is being implemented in states without even being passed by the Parliament.

Many Omissions

The draft is also extremely disappointing with respect to provisions related to children, women and excluded groups. Maternity benefits of Rs 1,000 per month for six months, an essential recommendation of the Campaign and the NAC has been withdrawn. Key provisions for malnourished children, out-of-school children, migrant workers, starvation deaths, destitute feeding and community kitchens have been deleted or diluted. The draft seems to provide an opening for the replacement of cooked meals with "ready-to-eat" foods, by defining "cooked meal" as "nutritious cooked and ready to eat meal", thus paving the way for contractors and corporations.

The entire well-crafted grievance redressal structure proposed by the NAC, built on the Campaign's proposal, has been junked. This includes the provisions for compensation and penalties and making non-bailable and cognisable the criminal proceedings for non-compliance. Similarly, the national and state food security commissions have been deprived of any real powers; they are just advisory bodies. Most of the transparency provisions in the Campaign and NAC draft have been dropped. Most importantly, the premise of the NAC grievance redressal mechanism was independence and autonomy of the functionaries. This has been thrown out by bringing in serving officers. This defeats the purpose of a system of checks and balances, where the implementation and monitoring were to be carried out by separate agencies.

The draft also gives full powers to the central government, including powers to modify or withdraw most entitlements and to specify the sharing of costs with state governments, for instance in Integrated Child Development Services (ICDS) and mid-day meal scheme which are entitlements under Sections 4, 5 and 6 of the bill; thus putting the guarantee of food security at the mercy of the government and bypassing the Parliament.

The entire bill in fact reveals the government's true objectives of limiting expenditure, denying responsibility and destroying existing systems as well. Although the government claims that this bill is based on the NAC's draft, it does complete injustice to even the already diluted draft that was prepared by the NAC.

The need of the hour is to strengthen the PDS through universalisation and reforms to ensure minimum leakages and efficient distribution. This has to be coupled with expanded and decentralised procurement. There is a need for radical restructuring of procurement, storage and distribution systems including (a) procurement from all mandis of all food grains at remunerative prices to provide critical market support to the majority of small, dry land farmers of the country who are bearing the brunt of the agrarian crisis and so far have been denied public procurement support; (b) storage facilities at every block; (c) creation of procurement-distribution zones with distribution of grain being from that procured within the zone, except in cases of shortfall, for which grain can be acquired from neighbouring

zones. This system of localised procurement, storage and distribution will not only boost production across the country, help track corruption and provide consumers with timely availability of (locally preferred) grains, but will also substantially reduce the current high transportation costs.

Lack of funds cannot be an excuse when the government is forgoing revenue worth Rs 5 lakh crore a year by giving tax breaks to the corporate sector and income taxpayers, and through excise, customs and sales tax reduction, but is not willing to spend even one-fifth of that amount to ensure the country's food security.

The government's neglect of agriculture has led to an agrarian crisis with lakhs of distressed farmers committing suicide. Food security cannot be achieved without addressing the decline in the agriculture sector. Now with more than 65 million tonnes of food grain lying in the FCI's godowns across the country or rotting in the open due to shortage of godowns, the government cannot use the excuse of unavailability of grains for not universalising the PDS.

Demands

If this bill is approved by the cabinet, the government will be missing an opportunity to do something about food security in the country. We believe that such a bill in fact does more damage than good and must be rejected. We reject this version of the NFSB and demand that any bill must at the very least have the following:

(1) Universalisation of PDS entitlements (along with expansion in quantity and - introduction of other commodities such as pulses and oil).

(2) Provisions to incentivise food production and for decentralised procurement and storage.

(3) Provisions for strengthening the PDS delivery system based on the experience of many successful initiatives by states such as Chhattisgarh, Tamil Nadu, Himachal Pradesh, Orissa, etc.

(4) Comprehensive measures for addressing child malnutrition that include school mid-day meals, universalisation with quality of the ICDS and maternity entitlements along with provisions for treatment of severely malnourished children.

(5) Clearly defined entitlements for vulnerable groups such as the aged, disabled, widows, migrants and destitutes including monthly pensions, community kitchens and destitute feeding programmes.

(6) Effective measures for grievance redress, transparency and accountability.

(7) Safeguards against commercial interference in any of the food/nutrition related schemes and against the introduction of cash transfers in place of PDS.

The Right to Food Campaign gives a national call for action to reject the government's

draft food security bill.

Article Three

Solar Farming Potential in India

8.24.11 Darshan Goswami, Project Manager, U.S. Department of Energy

The newest crop in India could be electricity from the sun. "Solar Farming" can help change India's energy economy to clean and efficient renewable energy during the day when it is needed the most, create millions of jobs, and could help India to energy independence and national security.

Imagine a crop that can be harvested daily on the most barren desert and arid land, with no fertilizer or tillage, and that produces no harmful emissions. Imagine an energy source so bountiful that it can provide many times more energy than we could ever expect to need or use. Imagine that an hour's worth of sunlight bathing the planet holds far more energy than humans worldwide could consume in a year. You don't have to imagine it -- it's real and it's here. Solar energy is an abundant enormous resource that is readily available to all countries throughout the world, and all the space above the earth. It is clean, no waste comes from it, and it's "free."

This "free" source of electricity can be used to supply the energy needs of homes, farms and businesses. Through the use of Photovoltaic (PV), Concentrated Photovoltaic (CPV) or Concentrated Solar Power (CSP), sunlight is converted into electricity that can provide power to businesses, homes, and drive motors. Solar power is becoming recognized as an important element in the energy supply planning and customer energy management of utilities worldwide.

I firmly believe that, to meet all its energy needs, India should diversify its energy mix by accelerating the use of all forms of Renewable Energy technologies (including PV, thermal solar, wind power, biomass, bio-gas, and hydro), and more proactively promote energy efficiency. However, in this article, I will only focus on the solar farming potential in India.

What is a Solar Farming?

On a solar farm, large amounts of power are generated from sunlight. Since solar energy is collected from a wide area, it is important to view the process as "farming" to "harvest" renewable energy from the sun. Solar farming is an opportunity for those in the agricultural sector to view solar energy as a "replacement harvest" and create cleaner forms of energy by transforming vacant or even underused land into farms that produce electrical energy. Solar farming lets individuals with non-income producing or otherwise

useless acreage to generate a really great rate of return on investment. Imagine making 12% to 15% or more assured return on investment for 30 years without any up-front money. If you have a farm or ranch, even if smaller than an acre, in a location that gets direct sunlight consistently throughout the day and year round, you might consider installing a solar energy system as an alternative source of power. Having a solar energy system would allow you to produce your own electricity. Additionally you could sell some of your electricity to your neighbors, local businesses, or even the local utility company. This is a brand new approach to the solar energy business.

Solar energy farms, especially larger ones, can be interconnected into the electricity grid and produce significant levels of electricity offsetting traditional sources of generation. Moreover, large-scale solar-power generation has the potential to help meet India's enormous energy needs.

Solar energy provides a new kind of experience to farmers in growing their crops. New commercial solar technologies enable farmers to capture solar energy to produce electricity, heat and hot water to enrich their farms, businesses or homes. Solar power provides economic development and energy independence to farmers.

How to Implement Solar Farming

Some governments are providing huge grants or subsidies to fund community solar farm projects as part of their energy programs. Solar farming can help advance India's use of renewable energy and help assure achievement of economic development goals.

To successfully implement Solar Farming requires feed-in tariffs. This allows farmers to invest with the security of 20 to 25 year Government Grants. The energy from these farms is purchased directly by utilities, who often sign 10 to 20 year energy purchase contracts with solar farm owners/operators thereby securing low-cost energy for the end user.

Solar farms will also play a vital role in reducing greenhouse gas emissions that contribute to global warming. Just like many other traditional farm activities, solar farming is truly environmentally friendly. By installing solar farm equipment, you'll also considerably boost the value of your property -- it's a great selling point should you decide to sell your farm.

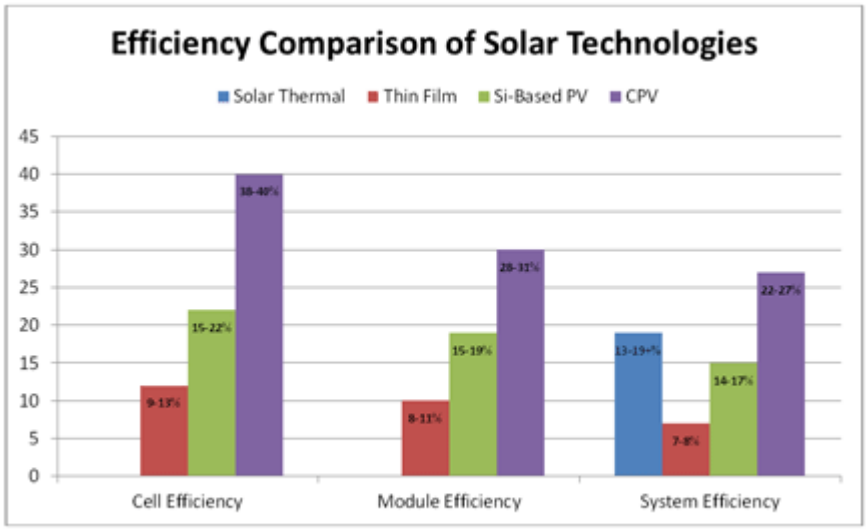
The Future of Solar Farming in Modern India

India is blessed with a vast Solar Energy potential. About 5,000 trillion kWh of solar energy is incident over India every year. Each day most parts of the country receive 4-7 kWh per

square meter of land area[5]. India's deserts and farm land are the sunniest in the world, and thus suitable for large-scale power production. India can lead the world by embracing the power of the sun, if smart business models and realistic policies can be developed and implemented nationwide as quickly as possible. The Indian Government should embrace favorable tax structures and consider providing financial resources to fund projects to put up community solar farms as part of their energy development programs. India can become the Saudi Arabia of clean Solar Energy.

Solar Energy has the advantage of permitting the decentralized distribution of energy, particularly for meeting rural energy needs, thereby empowering people at the grassroots level. Solar electricity could also shift about 90 percent of daily trip mileage from gasoline to electricity by encouraging increased use of plug-in hybrid cars. For drivers in India this means that the cost per mile could be reduced by one-fourth (in today's prices).

A decline in solar panel prices over the last two years also has contributed to exponential increases in solar deployment worldwide and lower project costs. These factors have allowed developers to offer solar energy prices comparable to those paid for wind and fossil-fuel power. A new technology that also holds promise is Concentrated Photovoltaic (CPV). First brought to commercial operation in 2008, CPV uses a concentrating optical system that focuses a large area of sunlight onto the individual photovoltaic cells. This feature makes CPV panels two to three times more efficient (approximately 40%) at converting sunlight to electricity as compared to silicon-based PV (15% to 20%) and thin films (9% to 13%)[3]. For details see the chart below.



Courtesy: SolFocus – Efficiency Comparison of Solar Technologies

Major cost reductions will be realized through mass manufacturing. The steep increase in

system efficiency, combined with decreases in manufacturing costs could level the cost of energy for CPV at around $0.10/kWh by 2015. Various incentives by Central and State governments, including tax credits and feed-in tariffs, can further reduce the cost. Also, the "free fall" in solar panel prices has been driven by the growth of solar installations, which is no longer a small business -- but an over $100 billion industry worldwide. Cost reductions are so dramatic that Bloomberg recently reported solar energy could soon rival coal. The cost has become so competitive during peak times in Japan and California that the U.S. Department of Energy's SunShot goal of $1 per watt for large projects by 2017 may happen a lot sooner[4].

Solar farms are becoming massive -- for example, the Castilla La Mancha solar farm in Spain occupies an area the size of seventy football pitches and will have 100,000 solar panels when fully operational; capable of generating 30 million kilowatts an hour.

The next generation distributed nature of solar farmed renewable energy will provide a strategic advantage -- it will make the present utility companies and infrastructure obsolete. In my opinion, all new energy production in India could be from renewable sources by 2030 and all existing generation could be converted to renewable energy by 2050, if deployment is backed by the right enabling public policies.

Farming Solar Energy in Space

Harvesting solar power from space through orbiting solar farms sounds extremely interesting. The concept of solar panels beaming down energy from space has long been thought as too costly and difficult. However, due to the current global energy crisis and concerns about the environment, Japanese researchers at the Institute for Laser Technology in Osaka have produced up to 180 watts of laser power from sunlight. Scientists in Hokkaido have completed tests of a power transmission system designed to send energy in microwave form to Earth. Mitsubishi Electric Corp., a manufacturer of solar panels, has decided to join a $24 billion Japanese project to construct a massive solar farm in space within three decades.

Japan has already started working towards its goal by developing a technology for a 1-gigawatt solar farm, which would include four square kilometers of solar panels stationed 36,000 kilometers above the earth's surface. The energy that will be produced by the solar farm would be enough to supply power to nearly 400,000 average Japanese homes.

California's next source of renewable power could be an orbiting set of solar panels, high above the equator that would beam electricity back to earth via a receiving station in

Fresno County. Sometime before 2016, Solaren Corp. plans to launch the world's first orbiting solar farm. Unfurled in space, the panels would bask in near-constant sunshine and provide a steady flow of electricity day and night. Receivers on the ground would take the energy -- transmitted through a beam of electromagnetic waves -- and feed it into California's power grid. Pacific Gas and Electric Co. has agreed to buy power from a start-up company that wants to tap the strong, unfiltered sunlight found in space to solve the growing demand for clean energy.

Conclusion

Solar energy represents a bright spot on India's economic front. If India makes a massive switch from coal, oil, natural gas and nuclear power plants to solar power, it is possible that 70 percent of India's electricity and 35 percent of its total energy could be solar-powered by 2030. This would require the creation of a vast region of photovoltaic cells in the Southwest and other parts of the country that could operate at night as well as during the day. Excess daytime energy can be stored in various forms such as molten or liquid salt (a mixture of sodium nitrate and potassium nitrate), compressed air, pumped hydro, hydrogen, battery storage, etc., which would be used as an energy source during night time hours.

Solar Energy will be competitive with coal as improved and efficient solar cells, concentrated photovoltaic (CPV) and concentrated solar power (CSP) enter the market. I predict that solar farming advancements and growth would empower India's rural economies. To take advantage of low cost renewable solar energy, companies will move their operations from urban areas to rural areas due to cheaper land and labor within the solar belt.

The Institute of Electrical and Electronic Engineering (IEEE) says solar photovoltaic is poised to compete with fossil fuels within the next 10 years because the PV systems have the potential to be the most economical form of generating electricity, even compared to traditional fossil fuels. "Solar PV will be a game changer," said James Prendergast, IEEE Senior Member and IEEE Executive Director4. "No other alternative source has the same potential. As the cost of electricity from solar continues to decrease compared to traditional energy sources we will see tremendous market adoption, and I suspect it will be a growth limited only by supply. I fundamentally believe that solar PV will become one of the key elements of the solution to our near- and long-term energy challenges."

Solar Farming is a renewable source of energy and the greenest form of commercial energy. Solar Energy has become the leading alternative to the costly and eco disasters

associated with fossil fuels. I urge the Government of India to accelerate the country's solar energy expansion plans and policies by implementing government subsidies for residential solar power through renewable energy rebates and feed-in tariffs. Solar Farming is a great concept for an efficient use of otherwise barren land.

I think it's time to recognize that our energy must ultimately come from renewable resources, and hasten deployment of renewable energy. India must ramp up its effort to develop and implement utility scale solar energy in conjunction with its private partners to bring solar energy to market as quickly as possible. Large utility scale solar energy farms are part of the answer to implementing energy generated from the sun to meet India's economic development goals.

For example, Google is investing $168 Million in the biggest Solar Farm ever. When completed in 2013, the Mojave Desert-based Ivanpah Solar Electric Generating System will send approximately 2,600 megawatts of power to the grid, doubling the amount of solar thermal power produced in the U.S and generating enough electricity to power 140,000 California homes when operating at full capacity.

I personally think there are no technological or economic barriers to supplying almost 100% of India's energy demand through the use of clean renewable energy from solar, wind, hydro and bio-gas by 2050. India needs a radical transformation of energy system to the efficient use of renewable energies, especially solar power.

Solar Energy is a game-changing program for India. India must accelerate and encourage the domestic development of renewable energy now. It is a question of whether we have the societal and political will to achieve this goal to eliminate our wasteful spending and dependence on foreign sources of energy and save our planet. The Indian Government should provide favorable government policies to ease the permitting process and to provide start-up capital to promote the growth of solar energy. I think that policy changes can go a long way toward reducing costs. In the coming years state and central governments should provide initiatives and other support in order to increase solar power plant capacity. India could potentially increase grid-connected solar power generation capacity to over 200,000 MW by 2030, if adequate resources and incentives are provided. Solar energy is a Win-Win situation for India and the environment, and has the potential to power India's economy, create millions of new jobs and change the face of India as a Green Nation.

http://www.energypulse.net/centers/article/article_display.cfm?a_id=2457

Article Four

Micro-explosion reveals new super-dense aluminium

Wednesday 24 August 2011

Professor Andrei Rode in the lab with colleague Dr Eugine Gamaly.

An international team of researchers including scientists from The Australian National University have created a new, super-dense version of aluminium that could lead to efficient production of new super-hard nanomaterials at a relatively low cost. In a paper published today in Nature Communications, the group has described how they discovered a way to produce body-centred-cubic aluminium, which is 40 per cent more dense. Super-hard aluminium was predicted to exist more than 30 years ago but has never before been observed. Professor Andrei Rode from the Laser Physics Centre at ANU said the state of any material depends on temperature and pressure. “For example, water turns into ice at low temperatures and hydrogen gas actually becomes metallic under extreme pressure in the middle of a star,” he said. “Lab experiments on producing high pressure and temperature generally use a diamond anvil with a point on one end to produce high pressure but this is limited by the strength of the diamond, which in the case of aluminium, is not hard enough to crush into a new state.

“We demonstrated that it is possible to create extreme pressure and temperature conditions in table-top laboratory experiments using an extremely short laser pulse to create a huge concentration of energy in a very short time and in a very small sub-micron volume inside a sapphire crystal, which is aluminium oxide.

“This experiment resulted in something like a micro-explosion which turned the aluminium to a plasma state that swelled but had nowhere else to go, creating gigantic pressure and dramatic changes in surrounding material properties and producing unfamiliar x-ray spectral lines.

“We did a lot of work using theoretical modelling to identify the spectral lines, which were in very unusual positions with various aluminium oxide crystal configurations, but could not find a satisfactory match between theory and experiment.

“We were about to abolish the search, when we had the crazy idea to compare any possible aluminium crystal phases to the observed spectra. The idea was considered crazy because it contradicted a conventional wisdom that aluminium surrounded by oxygen

must be oxidised in normal condition.

“But to paraphrase Niels Bohr, a Nobel Prize laureate in physics, the discovery of a new aluminium phase proved that ‘… the idea was crazy enough to be true’.

“This discovery shows a new way to form warm dense matter in relatively inexpensive table-top laboratory experiments and could also improve our understanding of the deep Earth core and planetary sciences.”

http://news.anu.edu.au/?p=10801

Article Five

Forest groups say Indonesia should look to Chinese model

Conservation | 15.08.2011

The Indonesian government has ordered a moratorium on new logging permits

Greenpeace says 1.8 million hectares of Indonesian forest is disappearing each year. China and India have launched successful reforestation initiatives in the past 20 years - might Indonesia follow their lead?

Indonesia has one of the world's highest deforestation rates and is the worst emitter of greenhouse gases when it comes to slash-and-burn land clearances.

Reforestation statistics don't account for how much timber a nation imports from abroad.

The government has taken note. This year President Susilo Bambang Yudhoyono tried to put the brakes on these troubling trends by announcing a moratorium on new logging permits.

But as Indonesian forests continue to vanish, some experts say a moratorium won't be enough and that a major reforestation effort is in order.

Several Asian countries, including China and India, have successfully launched similar programs, according to a recent study by the Rights and Resources Initiative (RRI).

RRI is a global coalition that pushes for policy reforms in forest land use.

The organization's study examined and compared five countries: China, South Korea, Vietnam, India and Chile.

RRI coordinator Andy White said countries that granted more land use rights to local communities and indigenous peoples were better able to see through their reforestation goals, compared to countries that didn't.

Land use reforms

Out of the five nations surveyed, China rehabilitated the most forest land, the study said. Beijing said it replanted 50 million hectares of land between 1990 and 2010.

Palm oil plantations absorb far less CO_2 than forest land.

Li Ping, a land rights specialist with NGO Landesa, said that breakthrough was due to land use reforms implemented at the turn of the century.

The Chinese government awarded about 90 percent of public forest land to farmers. In turn, they were permitted to use the parcel of land for two generations, up to 70 years, Li Ping added.

The policy created an incentive for farmers to care for the forest land, particularly as any improvements would benefit future generations. Li Ping said they were also allowed to keep any yields from the land.

The farmers were free to choose which trees they planted, but there were some limitations: The forest land could not be transformed into farming plots, and trees could only be chopped down with an official permit.

Greenhouse gas reservoirs

Meanwhile, critics say the statistics don't tell the whole story. For example, plantations are classified as woodland, though they absorb far less carbon dioxide than trees in a forest.

RRI coordinator Andy White said the controversy surrounding the definition of forest land is both political and technical in nature. From a climate standpoint, emissions capacity is a key concern.

A natural rainforest is able to store about 306 tons of carbon dioxide per hectare, whereas the amount absorbed by a palm oil plantation is just 63 tons.

"But it's also true that an oil palm plantation holds more carbon than a parking lot or a mine," White told Deutsche Welle. "So these are different land-use options - and why it's better to keep existing forests standing as much as possible."

In addition, reforestation figures don't take into account how much wood a country imports from other nations - meaning though China might be able to maintain its own forests, it does so by getting its supply elsewhere.

Dominic Elson, the author of RRI's report, said countries like China have been able to secure their raw materials supply in this way.

"While they've been buying all the cheap timber from Indonesia, they have been able to build their own plantation business and do it properly," he said.

Slash-and-burn methods have devastated forests in Indonesia.

White stressed that other countries shouldn't follow that strategy, though he said the political will shown by China and Vietnam to stop deforestation at home was worthy of praise.

Elson also underscored the importance of giving local populations a say in the matter, since ignoring community stakeholders can easily lead to conflict.

Indian forest rights activist Madhu Sarin said India's own efforts at replanting drew the ire of those living near designated reforestation areas.

"One reason the Indian government is claiming that they've increased forest cover...is because their forest department is forcibly banging trees into people's cultivated lands," she said.

Ambitious plans

Indonesia has not been spared conflicts over such matters, but the country also has the chance to take new, more positive approaches to working with local populations.

Kuntoro Mangkusubroto, the head of Indonesia's REDD-plus taskforce, said Indonesia still had time to push through such measures.

The government has promised to cut emissions related to slash-and-burn tactics by 41 percent through 2020.

But that hinges on support from donor nations like Norway, which has pledged $1 billion to aid forest protection efforts in Indonesia. Without international funding, Indonesia has set more modest goals of 26-percent cuts.

"That's something we would do on our own if we involve local populations," Mangkusobroto said.

Author: Ziphora Robina (arp)

Editor: Nathan Witkop

http://www.dw-world.de/dw/article/0,,15317475,00.html

Article Six

Lost Opportunity in Policy Wasteland

BIBEK DEBROY

The Economist, August 22, 2011

In all this talk of a second Green Revolution and extending the Green Revolution to low-productivity and subsistence-level agricultural areas, we don’t seem to pay much attention

to wasteland. Around 68.35 million hectares of the country's land is wasteland. There are different ways to classify wasteland. One is through ownership: forests, community-owned and privately-owned. We now (2005) have a Wasteland Atlas for India. It can be found on department of land resources, rural development ministry website.

Several agencies have estimated the total extent of wasteland in India. But their figures vary considerably, ranging between 30 million ha and 175 million ha, in part because of the lack of a mutually-agreed definition of wasteland. However, whether it is 30, 68 or 175 million hectares, we are talking about a large geographical area and some states and districts (data exist for districts) are more badly affected than others. For instance, 69.24% of Jammu & Kashmir's geographical area is wasteland. Himachal Pradesh, Manipur and Sikkim have wasteland in excess of 50%.With such a premium on land now, this is land not being productively used. Not just state-wise, even district-wise, there is correlation between existence of wasteland and prevalence of poverty.

There are topographical ways to classify wasteland too: gullies and ravines, scrubs, waterlogged and marshy, salinity and alkalinity, shifting cultivation, degraded forest land, degraded pastures, degraded land under plantation, sandy, mining and industrial wasteland, rocky, steep slopes, snow-covered and glacial, and so on, with composition of wasteland varying from one state to another.

There is an annual target of bringing 5 million hectares of wasteland under fuel-wood and fodder. Since 1985, we have had a National Wastelands Development Board (NWDB). Plus, there is a centrally-sponsored scheme, Integrated Wasteland Development Programme (IWDP). NWDB has an ABC classification of wasteland. A is deserts (hot or cold) and nothing can be done about them. However, something can be done about B and C, and let us ignore finer details about differences between B and C and classifications within B. What can we do about B and C? As per the 25-year perspective plan of the Planning Commission (1997), 88.5 MH was to be developed under watershed programme by the end of 13th Plan. Of the above,22.2 MH has already been developed during 9th and 10th Plan through a watershed approach The major thrust in the 11th Plan must be laid on developing untreated area in Desert Development Plan (DDP) and Drought Prone Areas Programme (DPAP) blocks and watershed development projects of the ministry of agriculture. In addition, special attention is to be devoted to developing villages where groundwater is overexploited. The emphasis is on water management and watershed programmes, with a little bit thrown in on soil management and switch to crops amenable to wasteland conditions. That is an unexceptionable principle and districts like Panchmahal and Dahod in Gujarat have had successes. But whether it is in Gujarat or an IWDP project, successes are confined to privately-owned land, not those that are community-owned.

With all this data floating around, it is a bit odd that we don't have a break-up of wasteland into forests, community-owned and privately-owned. More accurately, we have some sense

of forests (about half the total wasteland).But we don't have data separating the rest into community-owned and privately-owned. That is because surveys are old and titling unsatisfactory. As a general principle, common property resources are neglected and overexploited, the so-called tragedy of the commons. If this issue of incentives is known, why doesn't any government document address it, when talking about more efficient usage of wasteland. In the British colonial system, wastelands were not defined ecologically. They were areas that didn't yield revenue. Therefore, in some parts, the colonial government leased out this land to private cultivators, so that revenue could be generated. There is a great deal of euphoria about community-management, decentralised planning, Panchayati Raj institutions, and some of this is unwarranted. Yes, common property resources were better managed once, because community-based norms existed. But it will be impossible to rehabilitate these and the attempt is dysfunctional. One should think of leasing out community owned wasteland, even if there is no transfer of ownership. Some state governments have begun to do this. But that is for the private corporate sector. Such private leasing should not be interpreted as something that is exclusive to companies. While this can't be done for forest land, there is no reason why we shouldn't be able to do it for non-forest community-owned land. For example, with some kind of regulatory norms, why shouldn't we offer wasteland on long leases to NGOs In 1998, Planning Commission had a working group on leasing degraded forest land to the private sector. While this came down heavily against the idea of leasing forest land, it had no objections against leasing out non-forest wasteland to the private sector (interpreted as the corporate sector).It also made the point that thanks to land redistribution, substantial culturable waste area has been privatised as a conscious policy outcome. The leases recommended were for 20 years, extendable by an additional 20 years. Despite state government intentions to lease out non-forest wasteland, why has there not been enough interest from the private corporate sector? Primarily because capital costs of reclamation are considerable. But through IWDP, DDP and DPAP, there is already a subsidy. If leases are sufficiently long and extend to non-corporate private entities (with the subsidy), why shouldn't there be greater interest? The point is to get away from the mindsets that communities will deliver manna and private only means the private corporate sector. But we do need the surveys and titling.

(The author is professor at the Centre for Policy Research)

Article Seven

CARBON CRUNCHING AT LOW PRICE FOR THE BENEFIT OF ADVANCED NATIONS

AUTHOR: Dr. Sudhirendar Sharma

URL: http://chimalaya.org

Tucked up in the middle Himalayas, farmers in the mountainous state of Himachal Pradesh will crunch atmospheric carbon to help rid the Spaniards of their climate woes.

Over the next two decades, over eight lakh tons of carbon dioxide equivalents are likely to be sequestered in over 4,000 hectares of variedly degraded agriculture and forest land in the state. For this act of benevolence, each family in 177 village panchayats will earn between Rs 4,000 to Rs 7,000 per hectare per year, helping the counterparts in Spain pocket elusive carbon credits to sustain their lifestyles.

As a sub-component of the World Bank supported Rs 360 crore Mid-Himalayan Watershed Development Project, the creation of carbon sinks through afforestation is likely to accrue a net gain of Rs 20 crore to the communities over next 20 years. "Fiscal incentive has triggered a renewed interest in protecting the afforested lands," says Kushi Ram in Baddi Village in Kangra district. With little concern about where the money comes from, landowner interest is restricted to the shower of, what is touted as, 'green currency' from plantation on his 10 hectare area.

However, the transfer of funds between the host country and the client, DNA of Spain, is being brokered by the World Bank, which is a trustee of the BioCarbon Fund. Operative since May 2004, the BioCarbon Fund is a public/private initiative administered by the World Bank that aims to deliver cost-effective emission reductions, while promoting biodiversity conservation and poverty alleviation.

Upbeat about the first of its kind project in the mountains, it has been argued that not only will the project generate environmental benefits through carbon sequestration but will improve revenue-generating capacity of small farmers as well. Through restoration of highly vulnerable degraded lands in the districts of Kangra and Bilaspur, silviculture activities are expected to generate 343 man days of employment from each hectare of land as well. No wonder, on the face of it the project seems a win-win strategy for both the government and the communities.

Conditions apply

It is being hyped as one of the largest carbon revenue project of its kind, having surpassed the 3,500 hectares Clean Development Mechanism project in China. The recent agreement between the government of Himachal Pradesh and the World Bank, in force till December 2018, ensures that the carbon revenue will go to the village community, providing them the necessary incentive to protect watershed and forests.

However, ten per cent of the total carbon revenue will accrue to the forest department as overhead charges. Overtly the revenue sharing arrangement may seem ordinary transaction, in reality computing carbon sequestered both in tree biomass above and the soil below is immensely complicated. Calculated at a modest Rs 240 per ton of sequestered carbon dioxide, a ton of carbon dioxide converted into biomass under new plantations is counted as one credit.

The carbon credits from such projects are sold as Certified Emissions Reductions (CER). For

selling the CERs, the villagers get the 'cash' whereas the elusive 'credit' wrest with the buyer. Under the provisions of the project, conditions have been stipulated before the actual carbon revenue starts to flow.

The landowners need to ensure that the tree density is no less than 1,100 plants per hectare; that no felling of trees from the land under the project shall be permitted; and that no part of the land brought under such plantations shall be diverted for any non-forestry purposes. Given the diversity of land ownership, the net gain at the household level is likely to be truncated on account of differential carbon revenue sharing.

Farmers are expectedly awaiting the validity of the project by the UN Framework Convention on Climate Change (UNFCCC) when the institutional mechanism set up by the government for smooth transfer of carbon revenue at the local level would be put to test. Promising though it may sound, the flipside of the story is that the so-called Clean Development Mechanism, a central part of the Kyoto Protocol, has yet to come clear on its intended objectives.

Does the mechanism not provide developed countries with a cheap alternative to reducing their own greenhouse gas emissions? It is further argued that such projects promote cost-effective carbon reductions through 'offsetting' projects located in developing countries while simultaneously allowing developed countries to continue business-as-usual.

Mounting criticism

Although CDM projects are in the early stages of their evolution, criticism nonetheless has started piling against them in most countries. Not without reason as several projects have only secondary objective of promoting sustainable development in host countries.

While the CDM has created the largest carbon offset market, the CER have seemingly remained underpriced. Earning a meager Rs 7,000 a year from protecting a hectare of afforested land, that the project promises, may not be appealing enough should the land be valued otherwise! Given the fact that the mountainous state of Himachal Pradesh has an estimated 2.48 million hectares of wasteland, the potential of replicating carbon revenue generating project seem promising nonetheless.

However, developing such projects is technically cumbersome and financially infeasible unless there are donors to underwrite the preparatory expenses. Else, it doesn't seem economically expedient for a state to invest in a project that will generate only Rs 20 crore over a period of 20 years.

Undoubtedly, there is an urgent need to simplify methodologies, expedite the validation process alongside proper pricing of CER should the potential of carbon sequestration were to be optimally realised!

The project design document has positioned the sale of CERs as a critical incentive to the stakeholders to protect, regenerate and manage the watersheds without any comparison to the prevailing and emerging economic scenario in the state. Unless the stakeholders value the carbon revenue mechanism to their competitive advantage, such projects will continue to serve the interest of the clients only.

http://www.nl-aid.org/continent/south-asia/carbon-crunching-at-low-price-for-the-benefit-of-advanced-nations/

Article Eight

How safe is India's nuclear energy programme?

Posted: Tue, Aug 23 2011. 1:15 AM IST

A. Gopalakrishnan in his recent article said, "DAE management classified the audit reports as 'top secret' and shelved them. No action was taken on the committee's findings."

M. P. Ram Mohan

The March nuclear disaster in Fukushima in Japan led countries with nuclear power plants to revisit safety measures. The International Atomic Energy Agency constituted a global expert fact-finding mission to the island nation. The purpose of the mission was to ascertain facts and identify initial lessons to be learned for sharing with the nuclear community.

The mission submitted its report in June and the report stated in clear terms that "there were insufficient defence for tsunami hazards. Tsunami hazards that were considered in 2002 were underestimated. Additional protective measures were not reviewed and approved by the regulatory authority. Severe accident management provisions were not adequate to cope with multiple plant failures".

Further, on the regulatory environment the report states: "Japan has a well-organized emergency preparedness and response system as demonstrated by the handling of the Fukushima accident. Nevertheless, complicated structures and organizations can result in delays in urgent decision making." The inability to foresee such extreme scenarios is a forewarning to countries that are expanding nuclear capacity at a frenzied pace.

For India, this is a lesson and an exceptional opportunity to relook at the protected structures of the department of atomic energy (DAE), and establish more transparent processes and procedures.

In the past, the Three Mile Island incident (1979) and Chernobyl accident (1986) had provided similar opportunities to evaluate nuclear safety and regulatory systems. India, in response to these incidents, constituted safety audits to assess the safety of nuclear power plants. However, A. Gopalakrishnan, (a former chairman of Atomic Energy Regulatory Board) in his recent article said, "DAE management classified these audit reports as 'top

secret' and shelved them. No action was taken on the committee's findings."

If this is so, these reports, or at least action-taken reports, ought to have been published and made available. Such steps could have guaranteed DAE considerable public faith in the functioning of regulatory authorities and given significant confidence in engaging with stakeholders in the present expansion plan.

Nuclear Power Corp. of India Ltd, post-Fukushima has undertaken safety evaluation of 20 operating power plants and nuclear power plants under construction. The report titled Safety Evaluation of Indian Nuclear Power Plants Post Fukushima Incident suggested a series of safety measures that must be incorporated in all the audited nuclear power plants in a time-bound manner. Measures pertain to strengthening technical and power systems, automatic reactor shutdown on sensing seismic activity, enhancement of tsunami bunds at all coastal stations, etc.

However, in the same breath, the report provides assurance by stating that, "adequate provisions exist at Indian nuclear power plants to handle station blackout situations and maintain continuous cooling of reactor cores for decay heat removal". Further, the reports recalls, "the incidents at Indian nuclear power plants, like prolonged loss of power supplies at Narora plant in 1993, flood incident at Kakrapar plant in 1994 and tsunami at Madras (Chennai) plant in 2004 were managed successfully with existing provisions."

DAE's official response, post-Fukushima, has been cautious while providing assurance. Separately, DAE has made it clear the nuclear energy programme will continue as planned after incorporating the additional safety features identified by the safety audit report.

Prime Minister Manmohan Singh in his speech two days ago in West Bengal was emphatic about the future of India's nuclear energy programme. He said that "there would be no looking back on nuclear energy. We are in the process of expanding our civil nuclear energy programme. Even as we do so, we have to ensure that the use of nuclear energy meets the highest safety standards. This is a matter on which there can be no compromise".

However, with the memory of Bhopal accident, these assurances have done little to assuage us. The legal, administrative and political failure in Bhopal to effectively respond is a constant reminder that due diligence of major developmental projects is a necessary prerequisite.

S. Banerjee, chairman of Atomic Energy Commission and secretary DAE at the International Atomic Energy Agency Ministerial Conference on Safety, categorically said: "India's effort has been to achieve continuous improvement and innovation in nuclear safety with the basic principle being, safety first, production next." This is important at a time when we are in the process of expanding nuclear capacity at an incredible pace.

Currently, there are several domestic and international power projects in the pipeline. DAE has projected 20,000MWe (megawatt electric) by 2020 from present 4,780MWe, a fourfold increase from the current production. Going further, Banerjee stated that India hopes to achieve targets exceeding 30,000MWe by 2020 and 60,000MWe by 2032. This is a tall order,

considering our experience in executing major infrastructure projects. DAE has struggled in the past to achieve targets.

Execution of these targets is to be achieved by importing high-capacity reactors and through DAE's own programme. As we see greater activity in the nuclear energy sector—which was traditionally not transparent in engaging with the public—the trust deficit could only widen as we expand the programme.

Land acquisition is already a major concern for infrastructure projects and has become an issue at the proposed Jaitapur nuclear power plant as well. However, the biggest challenge in this expansion would be to convince the public of the safety and security of nuclear power plants and also arrive at a comprehensive information and communication package for states in whose territory projects are being executed. Because of the nature of India's nuclear programme—the combined existence of civilian and military programmes—the nation may not be in a position to achieve the kind of regulatory autonomy, process and engagement that has been witnessed in many European countries and in the US.

Europe, which has been at the forefront of engagement with its citizens, could possibly do so because many countries in Europe moved on to peaceful civilian use by shutting down military programmes. This allowed countries to establish credible, autonomous and competent regulatory mechanism with strong emphasis on public and stakeholder engagement for their civilian programmes.

The nature of Indian nuclear polity and engagement are different and what emerges now is the need for an overhaul of the regulatory process and its structure. The bifurcation of India's nuclear establishment into civilian and military, subsequent to commitment under India-US civil nuclear cooperation has provided with the prospect of an empowered regulatory system.

Incidents in Jaitapur and the Fukushima nuclear disaster have further pushed the government to commit to establish an independent nuclear regulator, the Bill of which is expected to be in Parliament any time this year. Nuclear programme is likely to face more complex issues in the future with respect to environment, social and health. Neighbouring countries may also join the chorus soon since some of the proposed nuclear power plant sites are close to our borders.

The existence of a liability regime is no panacea for operation of nuclear power plants and is an add-on to a necessary well-structured legal, regulatory and institutional environment.

M.P. Ram Mohan is a fellow at the The Energy and Resources Institute and is with Indian Institute of Technology, Kharagpur, as a sponsored research scholar. He chairs the Nuclear Law Association.

http://www.livemint.com/2011/08/22202845/How-safe-is-India8217s-nucl.html?h=B

Article Nine

Indians prefer eco-friendly products: Nielsen

Press Trust of India / New Delhi August 29, 2011, 18:44 IST

While shopping, a majority of Indians prefer to make decisions based on the impact of their purchases on environment and sustainability, according to a survey by the Nielsen Company.

"The Indian consumer is increasingly conscious of the benefits of environmentally friendly and sustainable practices... 86% Indian consumers surveyed, place faith in energy efficient products and appliances, followed by recyclable packaging (79%)," Global Online Environment and Sustainability Survey by Nielsen said.

Least impact was given to products not tested on animals (41%) and fair trade products (44%).

However, when it comes to actual buying, only about 44% Indians purchase eco-friendly products as they are 'very expensive'.

"The sensitivities to want ecologically friendly products are in place, but the high price of items [ranging] from recycled paper to organic foods make it difficult for consumers to purchase them for everyday use," Nielsen Executive Director Dipita Chakraborty said.

Given a choice, the Indian shopper would go for these, rather than a value for money deal, she added.

The trend is in line with global numbers, where 83% believe that manufacturers using recycled packaging and producing energy efficient products and appliances have a positive impact on the environment.

"The Indian shopper is very much in sync with the global consumer when it comes to environmentally sustainable products, from organic products to those tested on animals, there is fairly wide awareness among Indian consumers on what practice is environmentally friendly," Chakraborty said.

The survey results are based on responses of more than 25,000 Internet respondents in 51 countries throughout Asia Pacific, Europe, Latin America, the Middle East, Africa and North America.

India is one of the top three countries within Asia Pacific that have shown an affinity towards eco-friendly products.

Willingness to buy eco-friendly products is highest in Vietnam and Indonesia, while New Zealand, Thailand and Malaysia prioritise purchase based on value for money and promotions.

Concern about climate change and global warming among online consumers in India has

taken a back seat compared to other issues surrounding air and water pollution.

"Globally too, concerns around pollution override the issue of global warming," the survey said.

In India, while nine out of 10 people surveyed were concerned about air and water pollution, eight out of ten people thought that climate change was an important environmental issue.

http://www.business-standard.com/india/news/indians-prefer-eco-friendly-products-nielsen/145600/on

Article Ten

Sustaining forests: Investing in our common future

August 25, 2011

Every day forests provide benefits vital to life on Earth and to the quality of human life in particular. Currently, some 410 million people are highly dependent on them for subsistence and income, and 1.6 billion people depend on forest goods and services for some part of their livelihoods.1 In a more general sense, the entire global population depends on forests for their carbon-sequestering services. Forests have always been crucial to human life and economies, and they will become increasingly significant as the global human population grows by another 30 per cent – to 9 billion people – by mid-century. At the same time, our forests face many threats as a result of unsustainable use. As we move forward, our forests must play a critical role in supporting the growth of a global green economy.2 Innovative solutions, however, must be found to ensure sustainable forest management in the face of the many threats at hand.

This policy brief seeks to outline how forests can be a key part of a green economy that provides opportunities for innovative solutions to forest management. Forests are key assets in the structuring of a green economy as they provide a wide variety of services, including ecological infrastructure, which comprises public goods such as water and carbon regulation and tradeable goods such as timber, fibre, biomass and non-timber forest products. They also act as a source of livelihood, natural insurance, adaptation, employment and health services. Focusing on forests helps draw attention to the importance of creating a green economy at the local, regional and global levels.

The emergence of a green economy provides an opportunity for the development of innovative market and policy solutions that assign appropriate value to forests for the wide variety of benefits that they provide to people while also promoting long-term sustainable forest management. Innovative policies that create markets and present forests as investment-worthy assets within the economic system will attract new investment in forest

management and conservation from both the public and private sectors.

In this brief we first provide an overview of the many values of forest assets before reviewing the complex issues that threaten forests globally and lastly looking at the emerging innovative market and policy solutions that can promote long-term sustainable forest management and contribute to a green economy.

Download the briefing **here**

http://www.unep.org/ecosystemmanagement/Portals/7/Documents/unep_policy_series/5thUNEPPolicySeries.pdf

Article Eleven

Preserving biodiversity knowledge from impact assessment

Professionals assessing the environmental impact of proposed large projects are being urged to share the biodiversity data they generate.

29.08.11

A new Best Practice Guide produced by GBIF and the International Association for Impact Assessment (IAIA) explains the straightforward steps required to ensure that biodiversity data remain accessible for future decision-making, scientific research and society as a whole.

The guide was prepared in response to concern that vital data on occurrence of species at and around a proposed project site, gathered in the preparation of environmental impact assessments (EIAs), are often discarded and lost at the end of the project planning process.

Pilot projects in South Africa and India have helped to develop tools to facilitate the publication of biodiversity data from EIA through the GBIF network, making them freely available via the Internet.

Publishing EIA-Related Primary Biodiversity Data: GBIF-IAIA Best Practice Guide (pdf file, 1.8 MB) and a summary version are now available for download.

It provides a step-by-step guide for environmental assessment professionals, explaining the process of selecting software tools, preparing datasets and publishing them according to agreed global standards and protocols.

GBIF director Dr Nicholas King said, “Environmental impact assessment work globally generates an enormous amount of data about biodiversity that represents vital information for science and society.

“It makes no sense for that information to be thrown away once decisions about a project

are made. This guide shows that with very little additional effort, biodiversity data can be published and preserved for future generations."

The CEO of the IAIA, Rita Hamm, added: "IAIA members are keen to provide the most credible and objective assessment of projects, plans and policies, and the key to any quality assessment is the quality of the data upon which it is based.

"IAIA is pleased to partner with GBIF to promote this guide to capturing and maintaining primary biodiversity data gathered during EIA processes."

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http://www.gbif.org/communications/news-and-events/showsingle/article/preserving-biodiversity-knowledge-from-impact-assessment-activities-globally/

Article Twelve

Spare or share? Farm practices and the future of biodiversity

September 1, 2011 by Tim De Chant

Farming giveth and farming taketh away. Let's parse that statement: Farming provides food—that much is obvious. But farming also gobbles up land that would otherwise accommodate endless biodiversity and beneficial ecosystem services. To counter the ecological harm done by farms, we have two options. One is to make farming more ecosystem friendly. Known as land sharing, this choice differs from garden variety organic farming by enmeshing cultivation with conservation rather than just minimizing detrimental impacts. The other option, land sparing, intensifies current cultivation while leaving other land as wild as possible. If you're looking to feed people and maximize biodiversity conservation, you have to pick one.

The correct answer, at least according to a study published today in Science, is land sparing. The study's authors examined farms and forests in southwest Ghana and northern India. They found more overall diversity of bird and tree species per square kilometer in land sparing setups—where farming is intense and reserves off limits—than in land sharing

schemes—where farming and conservation occur on the same plot of land.

The ecologists involved in the study mapped out 25 one square kilometer plots in Ghana and 20 in India. The Ghanaian plots were divided almost equally among forest (8), large-scale oil palm plantations (8), and forest-farm mosaic (9). In India, they were split among five forest and 15 farm plots, five of which were low yield and ten of which were high yield. In each plot, the researchers measured average population densities of bird and tree species and binned each species into two broad categories—those that would thrive under a particular farming regime and those that would suffer. They then compared biodiversity statistics for land sparing regions (which contained both farmed and forested plots) with land sharing ones.

Unsurprisingly, all species fared worse when land was farmed. But the disheartening part—at least for those of us who dream of harmonious, ecotopian farms—was that more species were worse off on a region-wide basis under land sharing than land sparing. So although land shared between farm and forest is better for biodiversity on a single plot scale, the overall region is better off when some plots are intensively farmed and others are left alone.

In other words, sparing appears to be the least worst option. While some generalists thrive under land sharing, less mobile species with higher habitat constraints need special protection. Habitat reserves provide that, and land sparing schemes can support larger reserves. The only way land sharing excels at protecting biodiversity is when farm yields are impossibly low.

Land sharing, then, is the futon of biodiversity conservation. Just as a futon is both a middling bed and mediocre couch, land sharing is merely passable at producing food and so-so at protecting biodiversity. Neither futons nor land sharing systems excel at their dual tasks. As The Dude in The Big Lebowski would say, “This is a bummer, man.”

One drawback of land sparing is that it requires an immense amount of self-control on the part of individuals and society as a whole. Time and again we’ve challenged the inviolability of protected areas when we are—or think we are—short on resources. Conservation is hard, and plowing more land will always be the easier option. To prevent ourselves from doing that, we need to raise yields, which takes resources, training, and discipline. None of this will be easy.

Furthermore, raising yields sustainably, which the authors endorse, is going to be difficult. There are certainly some easy places to start—yields in much of Africa are dishearteningly low. But the world has embraced fossil fuel-driven, industrial agriculture for a reason—it’s the easiest way to squeeze more food from the land. If non-fossil fuel farming were the easiest option, we would have done that by now. Land sharing, on the other hand, trades low yields for closeness to nature. Locally this may be more sustainable, but is there enough land to feed 10 billion people that way? Probably not.

The choice between land sparing and land sharing is just one of many we will face as the planet's resources stretch thin. While I'm quietly rooting for integrated, ecologically friendly approaches, there seems to be growing evidence that intensively exploiting a limited footprint may be the better option. If that's true, the Romantic in me hopes we don't lose our connection with nature in the process.

Source:

Ben Phalan, Malvika Onial, Andrew Balmford, & Rhys E. Green (2011). Reconciling Food Production and Biodiversity Conservation: Land Sharing and Land Sparing Compared Science, 333 (6047), 1289-1291 : 10.1126/science.1208742

http://persquaremile.com/2011/09/01/spare-or-share-farm-practices-and-the-future-of-biodiversity/

Article Thirteen

Elephant Study Reveals Social Bonds, Communication Skills

August 29, 2011

Adam Phillips | New York City

Animals play key role in forest ecology

Those who think of elephants as solitary, gentle giants lumbering quietly in their zoo enclosures might be surprised by the range and force of their distinctive calls to each other in the wild.

Shermin de Silva, a University of Pennsylvania biologist, identifies that as a "trumpet" sound, one of 14 distinct vocalizations she and her colleagues have recorded in Sri Lanka's Uda Walawe National Park over the past six years.

"Trumpets are produced actually in situations of distress," says de Silva. "So they are not particularly happy vocalizations. They are either excited or distressed. But in addition to the trumpets, Asian elephants produce a very peculiar kind of sound that I call 'squeaks.'"

"Squeaks tend to be produced also in situations of alarm and in situations of submission. So when an elephant is backing away from an opponent or backing away from in some cases, people, and alarmed by people or jackals or perceived threats, they also produced an elongated form of that called 'squeals.' "

Asian elephant calves often emit a sort of prolonged roar when they're nursing or when they want attention.

"They also give long versions of the roar when they are separated," De Silva says. "And you

see animals roaring as they are trying to find their social companions. What do we mean when we say an animal is 'social?' And that is a very big question."

According to De Silva, elephant social life is based on a variety of female bonding behaviors. While some female elephants flit from one favored companion to another, others may visit a group of companions for days or even weeks, but always return to favored friends.

De Silva observed an elephant pair they named Kamala and Kanthi who were nearly inseparable.

"When I say that females are friends with one another, they actively have choices in where they go. So they can choose to be with somebody or not. Even though that choice is not apparent to us because all we see them doing is eating and moving. In the classic understanding of animal behavior, when two individuals are together spatially and they are together more often than you'd expect by coincidence, you are reasonably justified in thinking they prefer one another."

In contrast, older male elephants tend to go it alone. Young males often seek to be in the rough vicinity of older males, even though little or no bonding takes place.

"African elephants...derive some kind of knowledge by following around these older males," De Silva says. "They learn their place in the hierarchy, and there are unfortunately even incidents where young males who are deprived of this kind of guidance from older males - or females - become boisterous and psychologically traumatized."

De Silva says another focus of her research was how the elephants impacted the Sri Lankan environment. Elephants till the soil with their tusks and dig large holes where water can collect. They also uproot trees, and plant seeds through their droppings.

Although elephants can come into conflict with humans if they raid or trample crops, de Silva says their activities can indirectly benefit humans too.

"If there aren't elephants walking around dispersing seeds, there aren't going to be any trees, and if there aren't going to be trees of a particular kind that grow up to suck up water and create clouds, then that affects the water table. These are all indirect and long timescale interactions, but they are very important interactions."

De Silva notes that poaching, habitat encroachment, climate change and other factors threaten wild Asian elephant herds, such as those in Uda Walawe.

According to the Wildlife Conservation Society, the population of Asian elephants has declined significantly in recent decades, and their survival in the wild is endangered.

De Silva says that is why it is essential to work with local people to find ways to live alongside these impressive creatures, in a way that will allow both human and elephant

groups to thrive.

http://www.voanews.com/english/news/environment/Elephant-Study-Reveals-Social-Bonds-Communication-Skills--128596778.html

Article Fourteen

Resource investment opportunities in Africa abound

By: Esmarie Swanepoel

26th August 2011

Perth, Australia – With commodity demand soaring, the world's mining companies are increasingly turning to Africa to deliver resources to growing economies. As the continent is known to harbour vast quantities of natural resources including diamonds, gold, platinum and the all-important coal and iron-ore, refocused investment in the continent comes as little surprise.

Advisory firm Ernst & Young earlier this year reported that foreign direct investment (FDI) into Africa over the last decade had increased by a substantial 87%. In the last ten years, inward FDI had increased from 338 projects on the continent to 633 projects in 2010.

Despite the drop in investment in the past few years, following a peak in 2008, Africa remained an attractive investment destination throughout the global downturn and has managed to maintain its relative share of global investment flows as a result, Ernst & Young reports.

Further, the advisory firm expects strong growth in new projects into the continent, from 2012 onward, with FDI inflows forecast to increase to $150-billion by 2012.

Unsurprisingly, the large majority of the respondents to Ernst & Young's survey viewed the extractive industry as a major area of investment, perceiving it to be the sector with the highest growth potential over the next few years.

"When it comes to future investment strategies, Africa is high on the agenda of global investors, with 42% of the businesses surveyed considering investing further in the region, and an additional 19% of executives confirming they will maintain their operations on the continent," says Ernst & Young managing partner for Africa Ajen Sita.

He notes that emerging markets have also taken a growing interest in Africa, with investment from emerging markets increasing rapidly from 100 new projects in 2003 to 240 new projects by 2010. Emerging market investments into Africa now comprise 38% of the total FDI into Africa, up from 30% in 2003.

"This is confirmed by our survey of leading global businesses, with 74% of emerging market

investors surveyed showing that Africa has become a more attractive investment destination over the last three years. They are also increasingly positive about Africa's long-term investment potential," says Sita.

Analysis of the projects shows that investment success stories are spread across the continent, with ten countries attracting around 70% of the new FDI projects between 2003 and 2010. These include South Africa, Egypt, Morocco, Algeria, Tunisia, Nigeria, Angola, Kenya, Libya and Ghana.

A Changing World

Mark Otty, area managing partner at Ernst & Young for the European, Middle Eastern, Indian and African regions, says that the African growth story over the last decade is underpinned by a longer-term process of economics and regulatory reform that has occurred across much of the continent since the end of the Cold War.

He notes that this period saw inflation being brought under control, foreign debt and budget deficits reduced, State-owned enterprises privatised, regulatory and legal systems strengthened and several African economies opened up to international trade and investment.

Otty's comments are augmented by Australian African Mining Group interim committee member Bill Repard, who says that increased investment into Africa, specifically by Australian companies, has been driven by African nations that are improving their governance and the legislation covering the mining sector.

"The tide is flowing into Africa, and increasingly more and more companies have been spreading out into Africa," Repard says. He states that the continent still offers significant opportunities for miners, despite its long history of mining.

"Large parts of the continent remain untouched by modern exploration. They have been picked over since colonial days, and perhaps the eyes have been picked out and the close-to-surface discoveries have been made, especially in West and East Africa, but what you are increasingly seeing is sophisticated techniques being used to uncover new discoveries that are not easily attainable," Repard adds.

Mining Fund African Lion's senior mining analyst, Damon Rhodes, says Africa offers one great benefit to explorers: opportunity. "Exploration companies can apply the techniques which have led to Australian discoveries to similar geology over large portions of the African landmass," Rhodes says.

He adds that the investment firm is specifically focused on countries which it believes are geologically prospective, fiscally responsible, and encouraging of mining developments. These include South Africa, Tanzania, Botswana and Ghana.

Australia's Foreign Affairs Minister, Kevin Rudd, believes that Australian mining companies could offer significant advantages for resources development on the African continent, as the country boasts more than 150 years of dealing with "vast foreign mining companies" on its own soil.

In an address to the African Union earlier this year, Rudd said that Australia was ready to share its expertise in "industries of land", which included mining and agriculture, and which accounted for more than half of Australia's export earnings.

"There's no question that Africa's economic and political reforms, its agricultural and mineral wealth, and its economic potential have grabbed the world's attention.

"Africa is now profiting as never before from its natural resource wealth, and this is a key driver of its current success.
It has, for example, 30% of the planet's mineral reserves and exports 12% of the world's petroleum. It has 60% of the world's total uncultivated arable land," Rudd said.

South to South

The Australian Department of Foreign Affairs and Trade (DFAT) has estimated that Australia's investment into the African resources sector has tripled in size since 2005, and currently stands at around $20- billion.

It is estimated that around 220 Australian mining and oil companies are currently operational on the continent, with some 595 projects across 42 African countries. However, the DFAT states that the number of projects in which Australian companies have an interest could actually be higher, as the structure of multinational companies does not always allow for Australian connections to the projects to be reflected accurately in official statistics.

Further, if all mining services and equipment companies operating in Africa were included, the total number of Australian companies involved in the continent's resources sector would increase significantly.

It is currently estimated that Africa accounts for the largest share of Australian mining projects overseas, with nearly 40% of all overseas projects of ASX-listed companies in Africa.

The DFAT says that the extent of Australian interest in Africa's resources sector is spread widely across the continent, and includes most African countries of substantial size, with the exceptions being Sudan (and South Sudan), Chad and the Central African Republic, all of which have been affected by conflict and instability in recent years.

The last decade has also seen a number of mines being opened, or placed under construction, in less familiar territories, including the Perkoa zinc mine, in Burkina Faso, the Bonikro gold mine, in Côte d'Ivoire, the Syama gold mine, in Mali, and the Mbalam iron project, in Cameroon and the Republic of Congo.

Gold remains the commodity of choice for Australian miners looking to invest in Africa, with uranium following closely behind. The other most commonly prospected minerals are copper, platinum, diamonds and coal.

The DFAT notes that, while there are only a limited number of iron-ore projects identified on the African continent, the major ones would likely dwarf several other projects in terms of capital investment were they to proceed to construction and mining.

“A small proportion of companies have interests on other continents, and over 20% have projects in more than one African country. However, the majority of exploration companies, nearly all of which are listed on the ASX, are small and focused on one or two African countries,” the DFAT reports.

Further, fewer than 10% of these companies have operations based in Australia.

Repard notes that it is on the back of these major African projects that Australia would likely see the development of the next major resources company.

“I think you will see Australian companies merge and grow and move more into production. But you will also see companies like Rio Tinto increasing its presence across Africa, as we have seen with the recent takeover of Riversdale Mining, in the coal sector.

“The opportunity for a new Australian major to arise will come from Africa,” says Repard, who predicts that mining majors BHP Billiton and Rio Tinto would “certainly” move into Africa on a more prominent basis during the next decade, probably on the back of existing Australian projects.

Rhodes gives fair warning to potential investors in Africa, saying that exploration and mining are a long-term proposition, adding that, while several African countries maintained stability over this timeframe, many have not.

“There are a multitude of reasons sovereign risk can increase and, as we have seen in North Africa recently, it can increase rapidly. Understanding this and having comfort the people you are backing will (where possible) anticipate and respond appropriately to changes in sovereign risk are crucial to investing successfully in Africa,” he says.

Edited by: Creamer Media Reporter

http://www.miningweekly.com/article/resource-investment-opportunities-in-africa-still-big-business-2011-08-26

Article Fifteen

BOLIVIA

Women Fight Superstition, Machismo in Mining Cooperatives

By Franz Chávez

LA PAZ, Jun 23, 2011 (IPS) - Hundreds of women belonging to mining cooperatives in Bolivia are striving for the right to mine seams of tin and silver in the country's western highlands, where an age old superstition maintains that the presence of women "scares away" the minerals.

In these freezing high-altitude mineral-rich but impoverished areas, native women have been assigned a secondary economic role for centuries. But now they are seeking to make headway in traditionally male domains, say researchers interviewed by IPS.

Growing international demand for metals and soaring prices for the tin, silver and gold that are abundant in Bolivia have encouraged thousands of mainly indigenous peasant farmers and people from outside the altiplano region to go down the mines, organised in cooperatives.

The mining cooperative model in Bolivia, which dates back to 1968, is based on the principles of social solidarity, equal opportunity, respect for individuals and the elimination of exploitation, according to a declaration by the National Federation of Mining Cooperatives (FENCOMIN).

But these principles only applied to men, to the extent that the organisation's Women's Secretariat was headed by a man, the coordinator of the project on children and families in mining at the Centre for the Promotion of Mining (CEPROMIN), Cecilia Molina, told IPS.

"Women had to fight for the leadership of their own secretariat in the organisation of cooperatives," Molina said.

After years of struggle, women won a first victory at the congress of representatives of mining cooperatives in 2001, when they achieved recognition as partners and shareholders, privileges that had previously been denied to them, José Antonio Condori, author of the book Historia del Cooperativismo Boliviano (History of the Bolivian Cooperative Movement), told IPS.

http://ipsnews.net/news.asp?idnews=56209

Article Sixteen

We only get half of the mining boom profit By Malcolm Farr, National Political Editor

August 26, 2011 11:11AM

AUSTRALIANS are keeping from 50 to 60 per cent of the billions of dollars flowing from the mining export boom, the Reserve Bank has calculated.

RBA governor Glenn Stevens today revealed that 25 per cent of the boom dollars go to

buying goods from local suppliers, and 10 per cent to Australian wages.

Mr Stevens was in Melbourne addressing federal MPs on Parliament's economics committee. Labor's problem MP Craig Stevens this week stood down as chair of the committee to avoid distraction at the Stevens hearing.

The RBA governor gave no indication in his opening address that interest rates would be cut when the bank's board met on the first Tuesday in September, and repeated that Australia was well placed to manage the effects of financial slumps overseas. He said the central bank believed inflation could be kept under control.

Mr Stevens said the RBA calculated "about half of that higher terms of trade revenue (from mineral exports) stays in Australia one way or another''.

Over the past decade, of every dollar of extra revenue from the resources sector, around 10 cents was spent on domestic labour; around 25 cents on buying domestic services, between 15-20 cents went to government through royalties or taxation; and between five and 10 cents to Australian shareholders in mining companies.

Retailers won't agree, but Mr Stevens said Australian households did the smart thing by not splashing out with boom money.
He said they had replaced 15 years of splurging with three years of saving and stingy shopping.

Mr Stevens said cautious consumerism -- similar to what happened after World War II -- was now the "new normal'' and "it probably makes sense'' that Australians are not spending the huge incoming coming from mining.

"The 'new normal' -- which is actually the old normal -- is where households save a non-trivial fraction of income and keep their debt levels more in line with income,'' Mr Stevens said in his opening address.

"One positive is that the adjustment to this 'new/old' normal has been pretty fast, which means that a lot of it may already have been accomplished.

"Nonetheless, in view of the financial turmoil of recent weeks, it would not be surprising if a degree of caution remained for a while yet.''

In answer to questions Mr Stevens said the priority of saving had a "good side''.

"That's good because some day if there's a downturn you don't want households to be exposed in terms of their leverage (debt) when there's an adverse shock to income.

"And I supposed one could also say we are having a very substantial investment pick-up in the economy in aggregate....It's actually not a bad thing to have savings to help fund that.''

http://www.news.com.au/business/we-only-get-half-of-the-mining-boom-profit/story-e6frfm1i-1226122731932

Article Seventeen

SBB SPECIAL REPORT: LOST BLUESCOPE JOBS CAUSE ANGST

The closure of a BlueScope Steel blast furnace and hot strip mill, and consequent job losses, have sparked a fierce debate in Australia between those who believe the country's manufacturing base should be protected and others with a laissez-faire attitude to the market.

This week Australian prime minister Julia Gillard visited the Illawarra region – where BlueScope's main steelworks is situated – aiming to reassure BlueScope workers that the government would help them. Canberra has pledged A$30m (US$31.9m) towards restructuring Illawarra's economy and a further A$10m to assist sacked workers at the Port Kembla steelworks. But she ruled out a larger stimulus package for the region and resisted moves to adopt a protectionist stance towards the country's manufacturing sector.

Union officials have called on Canberra to do more and are meeting with BlueScope workers this week to review redundancy terms and see if any of the 800 jobs can be saved.

Gillard did, however, call on Australia's mining industry to assist the country's manufacturing sector by sourcing more steel locally for expansion projects.

Last week Australia's National Institute of Economic & Industry Research revealed that major resources projects are only using around 10% domestic steel and importing the rest from Asia.

A Melbourne-based trader told Steel Business Briefing that Australian steel producers did not generally produce the right kind of high-value steel used in major oil and gas projects in Queensland and Western Australia. This had to be imported from Japan, Korea and Taiwan. Further, the move to impose Australian industry standards for steel had been counterproductive as this was not applicable to the kinds of steel used for major projects.

A Sydney-based coal industry veteran said the steel industry in Australia had failed to restructure itself to become more productive, and to now blame the mining sector for manufacturing's demise was "naïve". "I had to make hundreds of coal workers redundant in the 1990s because of low coal prices. Now the mining sector is being blamed for doing well," he told SBB.

Steel Business Briefing (subscription)

Article Eighteen

The price of inaction

The debate on judicial activism versus restraint will ebb and flow with time and with the degree of impotency of the executive

A Visible Hand | Narayan Ramachandran

India is in a funk.

Financial markets are jittery, foreign direct investment is down, inequity is growing, growth is slowing and the population is agitated.

All this and the government is asleep at the wheel, or more precisely, all this because the government is asleep at the wheel. A somnolent, indecisive government has allowed many actors to step into the vacuum. The frustration with the executive branch has reached such a feverish pitch that the judiciary and civil society have dramatically stepped up their activism—demanding answers, proposing solutions.

India is in its second major constitutional crisis (the first was the period of the emergency). This crisis is the price of inaction. Our Constitution is based on the separation of powers among three branches of government—judiciary, executive and legislature—and held together by a system of checks and balances. This very structure is being threatened because the perceived failure of the executive has allowed judicial overreach and civil society access into traditional functions of government.

Much has been said in recent weeks about civil society's role in law-making. Let me focus instead on judicial activism. The Supreme Court of India derives its "activist" DNA from the ancient Indian tradition of bhashya—commentary or exposition on the original text. In an address to an American university, former chief justice P.N. Bhagwati asks the rhetorical question: "Is the function of a judge merely to declare law as it exists, or to make law?" He answers with: "It is for a judge to give meaning to what the legislature has said, and it is this process of interpretation that creates the most creative and thrilling function of a judge." Justice Bhagwati and Justice V.R. Krishna Iyer introduced reform in court procedures some 30 years ago to permit public interest litigation (PIL). PIL is really social action litigation introduced in court by anyone on behalf of the public interest. As a consequence of PILs, the Supreme Court has in effect "made law" such as in cases related to sexual harassment through the now famous Vishaka guidelines.

Detractors contend that in India, judicial activism is better classified as judicial populism. In many recent cases, courts have delivered judgements that seem to be pandering to the gallery—the Ram Janmabhoomi verdict by the Allahabad high court, and the denial of bail to all the 2G scam accused—are examples. Justice Markandeya Katju, an advocate of judicial restraint says: "Of the three organs of the state, it is only the judiciary which has the right to determine the limits of jurisdiction of all these three organs. This great power must, therefore, be exercised by the judiciary with the utmost humility and self-restraint."

The debate on judicial activism versus restraint will ebb and flow with time and with the degree of impotency of the executive. Where you stand on the issue may well depend on which side of the legal and political aisle you sit. In practice, the Indian Constitution has created three inter-dependent (not independent) branches of government. Despite the timeless nature of the issue, a few things can be done.

The first is to address the inaction by the executive. This is not a new phenomenon. It is the by-product of a philosophy of gradualism. Gradualism has been positive in arriving at consensus decisions that are based on deep and broad support, but has had the disadvantage of creeping into our execution. India suffers from severe implementation deficit disorder and this is beginning to cost us dearly. Many developing countries are corrupt, but they deliver. A focus on implementation is likely to be more productive than moralizing about corruption.

The legislature needs to wake up. Irrespective of which party is in power, the government proposes at lethargic speed and the opposition opposes. Substantive debates are replaced by shouting matches. Standing committees leave matters standing for ages. The opposition today is gloating about the ruling coalition's discomfort, little realizing that the entire Parliament's goose is being slowly cooked. Sadly, inaction has not been the sole prerogative of the executive. If anything, the legislature has been in deeper slumber.

The judiciary, too, can use this time of ascendancy to make some changes. Judicial reform efforts have so far been focused on transparency and efficiency (another idea moving at snail's pace). It must incorporate structural issues as well.

Important issues should not be decided by two-judge benches, but by all judges. PILs must be rigorously and effectively scanned for the purpose of social action. Better judges need to be appointed (remains the executive's privilege) and they need to be trained for the powerful roles that they occupy. If greater judicial activism is going to be a feature of Indian jurisprudence in contrast to the Anglo-Saxon kind, then judges will need not merely know law, but also be socially and politically wise.

PS: Plato in the Republic and Lord Krishna in the Bhagavad Gita speak of justice or dharma as "doing one's duty". The modern complexity is understanding the boundaries of that duty.

Narayan Ramachandran is an investor and entrepreneur based in Bangalore. He writes on the interaction between society, government and markets.

http://www.livemint.com/2011/08/28202251/The-price-of-inaction.html?h=D

Article Nineteen

India needs reforms at its very core

Challenges that lie ahead of India are perhaps more pernicious than the financial-fiscal

challenges that existed in 1991

By Keerthik Sasidharan, Special to Gulf News

Published: 00:00 August 26, 2011

Twenty years, since the economic reforms began in 1991, sometime this month India will be a $2-trillion (Dh7.34 trillion) economy (at current prices). Yet, as mutual fund prospectuses declare, "past performance is no guarantee of future returns". In fact, if I weren't the glass-half-full kind, the underlying structural similarities between the pre-1991 era and today warrant pessimism.

In the pre-1991 era India's economy had three principle bottlenecks.

The first was an overwhelming protection of Indian industries in the name of an import-substitution policy. This resulted in the emergence of a licence-quota dispensation with the government stipulating what industries were ‘small scale' and deserved protection. Predictably, neither innovation nor economies of scale were visible in these industries: both of which are characteristics of a well-functioning economic system.

The second was the gradual passing-by of a revolution in global production methodologies without India on board. From the 60s onwards, merchandise production was increasingly reconfigured to make use of cheaper labour far removed from the final markets. Countries that provided that labour moved up the value chain and doubled their per capita income within a decade

(Japan in 1960s, South East Asian Tigers in 1970s and China in 1980s). India was kept out of this transformational leap.

Political pandering

Third, and perhaps most crucially, the fabric of Indian political economy withered under the assault of increasingly ambitious interest-group politics. Since the state controlled access to resources, expedient clamouring for it by different groups led to a fiscal deterioration.

Today's India continues to be a miasma of, what the economist Ila Patnaik perceptively notes, "an improbable juxtaposition of archaic rules riddled with special exceptions".

The result is a lack of coherence on what the ground rules often are. And nowhere is this seen than in policies for industrial growth and land acquisition.

C. Rangarajan, the chairman of the Prime Minister's Economic Advisory Council, raises alarm when he notes that "appropriate land policy" is the need of the hour. Nowhere more so is time-contingent decision making processes needed than in areas where industry meets environmentally sensitive concerns. For now, while the government has shed its interventionist instincts in matters of external trade policy, the industrial and infrastructure

development policy has the rank smell of ad hoc decision-making and rent-seeking opportunities of days gone by.

Green costs

Over the past two decades, many of the advanced economies have continued to actively implement environmental-urbanisations policies that try to reduce contradictions between policy, intent and implementation. Yet, India remains a laggard as far as environment planning is concerned. It is increasingly clear that the cost of this abstention is yet to reveal itself.

Finally, the worsening of the macro-economic finances in the 1980s came thanks to a widening gap between savings and investment. In the present state, the diminishing quality of state finances (despite the fiscal reforms and budget management effort) is, in parts, thanks to the social welfare programmes that operate without concomitant technological or technical wherewithal to monitor the efficiency of these programmes.

Despite spending over 1 per cent of GDP on rural employment scheme, another $2 billion on the food bill, malnutrition has declined only 6 per cent since 1991; India remains at 65 among 84 in the Global Hunger Index. The easiest solution is to pour more money, which is what the Indian state continues to do. The right solution, however, requires a judicious mix of technology and financial prudence.

In essence, the challenges that lie ahead of India are perhaps more pernicious than the financial-fiscal challenges that existed in 1991.

A meaningful set of new generation of reforms go well beyond the gyrations of the stock market but into the daily lives of the Indian people. Whether such a radical refactoring of policy from that bastion of conservativeness, the Indian parliament, can be expected without public pressure is the question.

http://gulfnews.com/business/markets/india-needs-reforms-at-its-very-core-1.857328

THE WEEKEND INTERVIEW SEPTEMBER 3, 2011.

Article Twenty

Can the World Still Feed Itself?

Yes, says Nestle's chairman Peter Brabeck-Letmathe, but not if we burn food for fuel, fear genetic advances and fail to charge for water.

By BRIAN M. CARNEY

Vevey, Switzerland

As befits the chairman of the world's largest food-production company, Peter Brabeck-Letmathe is counting calories. But it's not his diet that the chairman and former CEO of Nestlé is worried about. It's all the food that the U.S. and Europe are converting into fuel while the world's poor get hungrier.

"Politicians," Mr. Brabeck-Letmathe says, "do not understand that between the food market and the energy market, there is a close link." That link is the calorie.

The energy stored in a bushel of corn can fuel a car or feed a person. And increasingly, thanks to ethanol mandates and subsidies in the U.S. and biofuel incentives in Europe, crops formerly grown for food or livestock feed are being grown for fuel. The U.S. Department of Agriculture's most recent estimate predicts that this year, for the first time, American farmers will harvest more corn for ethanol than for feed. In Europe some 50% of the rapeseed crop is going into biofuel production, according to Mr. Brabeck-Letmathe, while "world-wide about 18% of sugar is being used for biofuel today."

In one sense, this is a remarkable achievement—five decades ago, when the global population was half what it is today, catastrophists like Paul Ehrlich were warning that the world faced mass starvation on a biblical scale. Today, with nearly seven billion mouths to feed, we produce so much food that we think nothing of burning tons of it for fuel.

Or at least we think nothing of it in the West. If the price of our breakfast cereal goes up because we're diverting agricultural production to ethanol or biodiesel, it's an annoyance. But if the price of corn or flour doubles or triples in the Third World, where according to Mr. Brabeck-Letmathe people "are spending 80% of [their] disposable income on food," hundreds of millions of people go hungry. Sometimes, as in the Middle East earlier this year, they revolt.

"What we call today the Arab Spring," Mr. Brabeck-Letmathe says over lunch at Nestle's world headquarters, "really started as a protest against ever-increasing food prices."

Mr. Brabeck-Letmathe has extensive experience at the intersection of food, politics and development. He spent most of his first two decades at Nestlé in Latin America. In 1970, he was posted to Chile, where Salvador Allende's socialist government was threatening to nationalize milk production, and Nestlé's Chilean operations along with it. He knows that most of the world is not as fortunate as we are.

"There is a huge difference," he says, "between how we live this crisis and what the reality of today is for hundreds of millions of people, who we have been pushing back into extreme poverty with wrong policy making." First there's the biofuels craze, driven by concerns over energy independence, oil supplies, global warming and, ironically, Mideast political stability.

Add to that, especially in Europe, a paralyzing fear of genetically modified crops, or GMOs. This refusal to use "available technology" in agriculture, Mr. Brabeck-Letmathe contends,

has halted the multi-decade rise in agricultural productivity that has allowed us, so far, to feed more mouths than many people believed was possible.

Then there is demographics. Recent decades have seen "the creation of more than a billion new consumers in the world who have had the opportunity to move from extreme poverty into what we would call today a moderate middle class," thanks to economic growth in places like China and India. This means a billion people who have "access to meat" for the first time, Mr. Brabeck-Letmathe says.

"And the demand for meat," he says, "has a multiplier effect of 10. You need 10 times as much land, 10 times as much [feed], 10 times as much water to produce one calorie of meat as you do to have one calorie of vegetables or grain." Even so, we are capable of satisfying this increased demand—if we choose to. "If politicians of this world really want to tackle food security," Mr. Brabeck-Letmathe says, "there's only one decision they have to make: No food for fuel. . . . They just have to say 'No food for fuel,' and supply and demand would balance again."

If we don't do that, we can never hope to square the drive for biofuels with the world's food needs. The calories don't add up. "The energy market," Mr. Brabeck-Letmathe argues, "is 20 times as big, in calories, as the food market." So "when politicians say, 'We want to replace 20% of the energy market through the food market,'" this means "we would have to triple food production" to meet that goal—and that's before we eat the first kernel of what we've grown.

Even if we could pull this off, we will never get there by turning our backs on genetically modified crops and holding up "organic" food as the new gold standard of safety, purity and health. Organic production is all the rage in the rich West, but we can't "feed the world with this stuff," he says. Agricultural productivity with organics is too low.

"If you look at those countries that have introduced GMOs," Mr. Brabeck-Letmathe says, "you will see that the yield per hectare has increased by about 30% over the past few years. Whereas the yields for non-GMO crops are flat to slightly declining." And that gap, he says, "is a voluntary gap. . . . It's just a political decision."

And it's one thing for rich, well-fed Europe to say, as Mr. Brabeck-Letmathe puts it, "I don't want to produce GMO [crops] because frankly speaking I don't want to produce so much food." That, he says, he can understand.

What's harder for him to understand is that Europe's policies effectively forbid poor countries in places like Africa from using genetically modified seed. These countries, he says, urgently need the technology to increase yields and productivity in their backward agricultural sectors. But if they plant GMOs, then under Europe's rules the EU "will not allow you to export anything—anything. Not just the [crop] that has GMO—anything," because of European fears about cross-contamination and almost impossibly strict purity standards.

The European fear of genetically modified crops is, he says, "purely emotional. It's becoming almost a religious belief."

This makes Mr. Brabeck-Letmathe, a jovial man with a quick smile, get emotional himself. "How many people," he asks with a touch of irritation, "have died from food contamination from organic products, and how many people have died from GMO products?" He answers his own question: "None from GMO. And I don't have to ask too long how many people have died just recently from organic," he adds, referring to the e. coli outbreak earlier this year in Europe.

Nestlé itself has at times been painted as an enemy of the world's poor—for 30 years it has contended with a sporadic boycott movement over the sale and marketing of infant formula in the Third World, a push that some rich Westerners find unethical. On the other hand, under Mr. Brabeck-Letmathe, Nestlé's corporate strategy has emphasized that all food markets are intensely local. Americans may increasingly buy all drinks by the gallon and chocolate bars by the pound, but in many parts of the world a trip to the store might yield a single Maggi cube—the Nestlé-made bouillon cubes that are ubiquitous in many countries. In these countries, single servings of many products are sold in little foil packets to allow people to match their spending to their cash flow.

This is, Mr. Brabeck-Letmathe contends, an extension of Nestlé's original reason for being. Nestlé exists, Mr. Brabeck-Letmathe says, because as Europe's population "urbanized," as people moved to the cities and traded their ploughshares for time cards, "somebody had to ensure that people" who worked 12 hours a day in a factory could feed themselves. For the first time in history, "you need[ed] a food industry. You need[ed] somebody who takes a product, who treats it so that its shelf life allows it to be transported, to be brought into the consumption center. That's why we have canning, that's why we have pasteurization, that's why we have all these things."

The vast majority of us would have no idea any longer how to feed ourselves if we turned up one day to find the supermarket empty. We rely on industrialized food production, distribution, preservation and storage to make our urban lifestyles, our very lives, possible. And "it was not the state that took care of this thing. It was private initiative." Today, Nestlé employs some 300,000 people, takes in some $100 billion a year in revenue—and yet represents just 1.5% of a global food industry that feeds billions.

But for private initiative to work that kind of miracle, you need a market. Mr. Brabeck-Letmathe even worries about the absence of a functioning market for water. Some 98.5% of the fresh water the world uses every year goes to agricultural or industrial use. And in most cases, there is no market for how that water is allocated and used. The result is waste, overuse and misuse of the water we have. If we don't do something about that, Mr. Brabeck-Letmathe fears, we will soon run ourselves dry.

Up to now, he says, our response to water shortages has focused "on the supply-side": We build another dam, or a canal to bring water from one place to another. But "the big issue," he contends, "is on the demand side," and the "best regulator" of demand is prices.

"If oil becomes scarce," he notes, "the oil price goes up. But if water does, well, we still pump the same amount. It doesn't matter because it doesn't cost. It has no value." He drives this point home by connecting it back to biofuels: "We would never have had a biofuel policy—never," he contends, "if we would have given water any value." It takes, Mr. Brabeck-Letmathe says, "9,100 liters of water to produce one liter of biodiesel. You can only do that because water has no price."

He cites Spain as an example of an agricultural sector in need of adjustment. "The total [output] of the Spanish agricultural system," he says, "is less in value than the subsidies they receive between the Common Agricultural Policy, the subsidies for tax relief, the subsidies for water."

'Take away the emotion of the water issue," Mr. Brabeck-Letmathe argues. "Give the 1.5% of the water [that we use to drink and wash with], make it a human right. But give me a market for the 98.5% so the market forces are able to react, and they will be the best guidance that you can have. Because if the market forces are there the investments are going to be made."

The world's population is projected to hit nine billion by mid-century, up from 6.7 billion today. So, can we feed all those people? Mr. Brabeck-Letmathe doesn't hesitate. "We can feed nine billion people," he says, with a wave of the hand. And we can provide them with water and fuel. But only if we let the market do its thing.

Mr. Carney is editorial page editor of The Wall Street Journal Europe and coauthor of "Freedom, Inc.," (Crown Business, 2009).

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