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**Innovations, institutions and involvement:
Socio ecological crisis and insurgency in marginal
environments**

by

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Innovations, institutions and involvement:

Socio ecological crisis and insurgency in marginal environments¹

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South Asian region is going through a crisis in high productivity regions as well as in the marginal environments. In the former case, the technological success of yester years has created problems of sustainability and viability. Farmers have committed suicide and policy makers have not gone beyond offering free power or cheaper inputs (which make the crisis even deeper). In the latter case, the lack of induced technological change has created crisis of expectations. The frustrated youth has taken to violent means of asserting its lack of confidence in the current strategies of engagement by state and markets. The insurgency movements from Nepal, northeast India, Bangladesh, Myanmar, Bihar, Orissa, Andhra Pradesh, Jharkand, Chhatisgarh, Madhya Pradesh, Maharashtra and parts of Tamil Nadu and Karnataka are concentrated in biologically and natural resource rich regions inhabited by extremely poor people. There are 150 districts in India reported to be affected by naxalite violence. If this is not an eloquent proof of the failure of public policy in listening to the voices of grassroots, what is.

In this paper, I argue that the process of internal colonialism may cost us a great deal in the onward march towards economic prosperity of the country and the region. The Assam agitation had demanded an IIT in Guwahati, which indeed came about. Likewise, in many other regions the youth is demanding better opportunities for adding value to local resources, skills and knowledge so that livelihood opportunities can expand and grow. There is no justification for class IV (drivers, guards, peons, gardeners and other casual workers) employees in formal and informal sectors to be drawn primarily from marginal environments. Educational levels are generally low (exceptions being in northeast and Uttranchal), market forces are weak, public infrastructure and quality of human resources is poor and in many cases even the civil society organizations are not very active in such regions. The insurgency invariably fills the gap.

I propose transforming this situation by triggering a movement for what I call as 'Innovation Insurgents'. The idea is that those young people who are angry and are willing to destroy the existing icons of power and authority have a reason to feel angry. We have to accept their frustration as genuine and legitimate. It is true that violent means very seldom can achieve, if ever, positive results. Therefore, the power to destroy has to be transformed into power to create. I submit that the examples of grassroots innovations and traditional knowledge that we have collected from over 400 districts in India provide a basis for attempting this transformation. It will be naïve on my part to suggest that these insurgents will overnight take over the function of innovation augmentation or knowledge

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brokers and managers to build value chain around their indigenous technologies. I also understand that national policy makers are not yet ready to take knowledge based approach to alleviate poverty and generate employment. Why else will the writers of national rural employment policy make an assumption that poor people have only hands, legs and mouth but no head. The entire employment programme builds upon the ability of poor people to only contribute labour. The menial aspect of people gets recognized, the mental aspect, i.e., the knowledge richness is ignored. The only resource in which poor people are rich is their knowledge (and institutions and values). Unless we build upon richness of nature and richness of their knowledge, the people on the margin will not become major actors in transforming the grim situation in these regions.

The *innovation insurgents*: Making the naughty boy/girl, the monitor

The Honey Bee Network triggered the debate on the ethics of knowledge and resource extraction sixteen years ago. It appeared to many of us involved in dealing with peoples' knowledge and resources that our own conduct was not very different from other exploiters in the society. The landlord exploited in land market, the lenders in credit market, the employers in the labour market and the intellectuals in the knowledge market. Degree varied, so also the scale and the pervasiveness. Obviously, not everybody in these markets exploited the weaker partner equally or at all.

The knowledge rich, economically poor people may have lost many other struggles. But they should not suffer yet another defeat in the arena of knowledge economy. One has to work with those members of the insurgent groups who would like to become *innovation insurgent* and thus identify, document, valorise and commercialise the knowledge based products and enterprises to generate employment for local people. This is an entrepreneurial role for essentially activist people. Civil society provides space but the institutional conditions for this transition will require support from the state and the market.

The idea of *innovation insurgents* builds upon following assumptions:

- a. The struggle of local communities mainly in forest and other marginal regions have been around *jal, jungal, and jamin* (water, forest and land). The '*jankari*' (knowledge) has not been generally a basis for struggle. In the emerging knowledge economy, the knowledge of people is the most precious resource. However, the rights of the people in this knowledge are not yet properly defined, or for that matter even recognized. Indian Patent Act, as recently amended, puts traditional knowledge almost entirely in the public domain. In the anxiety to prevent others from exploiting this knowledge, we have almost given away the intellectual property rights of the local communities and individuals on this resource. However, despite these weaknesses, through the concept of community rights asserted through community institutions and Prior Informed Consent (PIC) framework, we can make headway.

- b. The knowledge and the resources are governed respectively by private, community and public domains. The complexity of private knowledge rights on community and public resources and community knowledge rights on private resources, illustrates how the matrix of these rights can pose tremendous challenge. However, local institutions with supporting national policies can find a way through this complexity.
- c. The crux of the matter is the ability of state, market and civil society institutions to add value to local knowledge, provide risk capital, generate entrepreneurial capabilities and ensure fair trade opportunities. It is not impossible to harness the forces of globalizations for empowering local communities and individual knowledge holders. Much will depend upon how accountable, ethical and transparent the mediation between local and global markets is.
- d. The repeated failure of state to provide basic necessities to people in the regions has created deep suspicion about any new initiative. There is no reason why the idea of *innovation insurgents* will not suffer from the same doubt and stigma. The mediation, therefore, will require patience but also creating new standards of responsiveness which typical bureaucratic systems are incapable of.
- e. The sanctions for unresponsiveness on the part of supply side will have to be spelt out just as the genuine uncertainty in building the value chain will have to be appreciated by the potential *innovation insurgents*.
- f. The knowledge institutions within the communities will also suffer from tensions because of gender, caste, and class contradictions historically perpetuated in many regions. It is natural that these contradictions will tend to assert. Only redeeming factor is that in the case of traditional herbal medicine for human and animal use or even for agricultural applications, the caste and class barriers often give way when expertise of the healer is established. Knowledge economy in that sense, can provide palliatives for many other inadequacies.

How would the strategy work?

The *innovation insurgents* would be enabled through national rural employment programme and other self-employment programmes to inventories the resources, biological, physical and knowledge in a community knowledge register. These resources will then be utilized to explore the opportunities for value addition. The experience of working with public R&D institutions does not always inspire confidence in the mind of local communities. The interface in this regard will have to be monitored by empowered science and technology leaders who believe that such a value addition is indeed possible. The pooling of local best practices would provide initial jump start to the entrepreneurial process. The horizontal markets will be as important as the vertical markets. The issues of labeling, certification and initial introductory dissemination will have to be addressed in a time bound manner.

The innovations from other regions available in the Honey Bee database and at NIF (National Innovation Foundation) will be made available to the *innovation insurgents* groups for selection. Resources will be mobilized for ensuring demonstration of chosen technologies for rural resource use. It is obvious that not all technologies will work. The failure of some and success of others will generate, hopefully a risk taking culture. In any case, *innovation insurgents* are extreme risk takers. In fact, the suicide bombers surpass all limits of risk aversion. We have to ensure similar dedication among the *innovation insurgents* for experimentation, entrepreneurship and emancipation of local communities from the history of drudgery, exploitation, iniquity and insensitivity.

Summing up:

I am not suggesting that *innovation insurgents* initiative can solve all problems of natural resources management in marginal environments. I am only suggesting that there is a need to listen to the angry youth of our society who fortunately is not willing to be patient indefinitely with the continued injustice and exploitation. Their restlessness is the biggest asset that this initiative intends to build upon. The role of financial, R&D, market and design institutions is obvious in building value chain and providing back up support to the *innovation insurgents*. If we don't develop a better alternative than this approach, we might as well, try it.