

Global Assessment Report  
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Employment policies and disaster risk reduction

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# Employment Policies and Disaster Risk Reduction

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## Employment, Economic Growth and Disaster Risk Reduction

The growth of productive employment opportunities has a central role in disaster risk reduction. Disasters have the potential to negate the growth of decent work opportunities and therefore measures to promote productive employment, decent work and income opportunities must be combined with measures for disaster reduction. The ILO's Strategic Policy Framework for 2010-15, clearly endorses supporting member States "in the promotion of productive employment, decent work and income opportunities in disaster risk reduction/recovery measures..."<sup>1</sup>

The links between employment and disaster reduction (DRR) are many and work in several different ways. We outline some of the major links below.

*Jobs-rich, pro-poor employment growth:* When the process of economic growth is jobs-rich and pro-poor, i.e. it generates a significant growth in productive employment opportunities, especially for the poor and vulnerable, it will reduce the risk of disasters by directly contributing to incomes and savings and hence to the resilience of the population.

*Environment –friendly employment growth:* If the growth process is also environment-friendly, this will further contribute to DRR, by ensuring that people live and work in safer environments and their activities preferably improve the environment, but certainly do not contribute to, environmental degradation.

*Diversification of employment:* Investments are required in the diversification of economic activities. The role of diversification in spreading and reducing disaster risk is well established, and needs to be an explicit element of long term national development policy.

*Spatial redirection of employment:* DRR also requires spatial redirection of economic activity and employment opportunities, away from congested, risky areas to safer locations. A key element here is to set up new safe sites equipped with infrastructure and facilities to facilitate production, storage and marketing. This would attract new and existing enterprises to locate/relocate at these new sites. This is, for example, being attempted in Haiti under the National Recovery and Development Programme.<sup>2</sup> In rural areas, spatial redirection of activities is needed to ensure that adequate forest cover is maintained and that watersheds are planned with a view to protect forests and ensure drought proofing and flood prevention. This is being done in several countries including India, where watershed planning projects, have been in operation for some time.

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<sup>1</sup> See ILO, *Strategic Policy Framework, 2010-15, Making Decent Work Happen*, [http://www.ilo.org/wcmsp5/groups/public/---ed\\_norm/---relconf/documents/meetingdocument/wcms\\_102572.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_102572.pdf)

<sup>2</sup> See Government of the Republic of Haiti, *Action Plan for National Recovery and Development of Haiti: Immediate key initiatives for the future*, Port au Prince March 2010, Section 4.1.

*Public employment programmes:* By providing jobs and earnings, and being able to expand or contract as needed, public employment programmes play a role in maintaining consumption levels and protecting assets and human resources through crises. They also have a key role in the generation of disaster risk reducing investments.

*Training programmes:* Training has to be closely related to the needs of the job market and in disaster –prone areas it must include providing skills in safe construction, keeping in mind the natural hazards encountered in the area.

*Employment with social protection:* When employment growth is accompanied by the extension of social protection, it ensures that there is a mechanism to provide a cushion against sudden sharp declines in earnings due the occurrence of natural hazards like earthquakes, cyclones, tsunamis, droughts, famines and floods, but also other risks including those arising from fluctuations in economic activity due market factors.

*Microcredit programmes:* These enable groups, typically of poor people, to undertake economic activities on a joint or individual basis and help to promote the growth and diversification of employment within households and thereby contribute to DRR. Belonging to a microcredit group may help secure the help of other members during times of crisis.

*Micro insurance programmes:* The working poor, especially in less developed countries, are not covered by commercial insurance. Such individuals can get together to form a contributory micro insurance group to cover employment related risks. In the informal sector, natural disasters may wipe out not only the work site, viz. the home, but also much of the fixed and working capital of the enterprise. Belonging to a micro insurance group may help a member to get compensation for lost assets as well as death and injury.

*The role of the work setting:* Employment involves working together with others: employers, other workers, suppliers, buyers or micro-credit, micro insurance and other self-help groups. When the bonds are close and there is mutual trust, or where there are well functioning representative organizations like trade unions, employers' organizations and other bodies, it is possible to promote knowledge about DRR and measures that can be taken by the individuals and the groups involved. Groups can participate in or run early warning systems and contribute to disaster preparedness; they can build up and use savings to meet disaster related contingencies; they can undertake small investments to reduce disaster risk, and they can educate their members about disaster preparedness.<sup>3</sup>

*Employment monitoring:* Given the importance of employment both as an early victim of economic fluctuations and as a means out of crises, investment or expenditure in DRR

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<sup>3</sup> See Joan Parker and Geetha Nagarajan, "Can Microfinance Meet the Poor's Financial Needs in Times Of Natural Disaster?" May 2000, [http://www.bwtp.org/arc/mfdm/Web%20Resources/MF\\_%20Natural%20Disasters/1040%20can%20mf%20meet%20financial%20needs%20in%20times%20of%20nd.pdf](http://www.bwtp.org/arc/mfdm/Web%20Resources/MF_%20Natural%20Disasters/1040%20can%20mf%20meet%20financial%20needs%20in%20times%20of%20nd.pdf)

must include the creation and strengthening of several mechanisms to monitor the employment situation and promote employment creation. Among these would be a government agency with the mandate and capacity to do labour market analysis and regular monitoring of labour market trends; maintain and update a shelf of projects that can be implemented by public employment programmes at short notice; and, continuously monitor and evaluate the working of public employment programmes with a view to improving their effectiveness.

## Employment and Macroeconomic Policies

In many developing countries employment considerations are absent from the set of macroeconomic policies. In a recent review Mohammed Muqtada<sup>4</sup> has shown that the full employment objective which was important during the 1950s and 1960s, ceased to be significant for policy makers from the 1970s. The new approach, often called the Washington Consensus, focused on sound macroeconomic fundamentals and the allocative efficiency of the market and assumed that employment and social progress would follow as a consequence.

In developing countries stabilization, accompanied by decontrol and liberalization, became the dominant policy. Macroeconomic policy focused on keeping inflation in check through both normal times and recession periods with severe consequences to employment creation.

Over the 1980s and 1990s stabilization policies resulted in curtailment of public expenditure, especially on development, reduction of imports and restrictive monetary policies. One major consequence was declining public investment. In 37 sub-Saharan countries public investment as a share of GDP declined from the mid-1970s to the early 2000s. Not surprisingly, output and jobs growth were adversely affected. As Muqtada argues:

..in many countries, the instruments (e.g. inflation and deficit controls etc.) that were used to deliver static efficiency gains were themselves the major reasons for growth failures. In other words, the processes set by the policy reforms, by ignoring the demand side of the country's economic activity created the *raison d'être* for inefficient growth and employment outcomes.<sup>5</sup>

While the Poverty Reduction Strategy Papers (PRSPs) were developed by the World Bank to address poverty reduction, they did not focus enough on employment creation, which should have been the centre piece of any poverty reduction strategy. As the ILO has repeatedly stressed, economic growth must be based on increasingly utilizing the

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<sup>4</sup> M Muqtada, *The Crisis of Orthodox Macroeconomic Policy: The Case for a Renewed Commitment to Full Employment*, ILO. Employment Sector, Employment Working Paper No. 53, Geneva, 2010

<sup>5</sup> Ibid, p.8.

assets of the poor (principally labour); and all economic policies should be combined with a full employment strategy for achieving full, freely chosen productive employment, alongside fundamental rights at work, adequate income and social protection.

The ILO concept of decent work includes both productive employment creation and social protection<sup>6</sup>. Decent work policies aim, inter alia, *both* at creating productive employment to provide adequate income to the beneficiary to cover consumption and saving in “normal times” *and* social protection to ensure that the beneficiary can cope with income fluctuations without a decline in living standards. On the employment creation side there is a need for jobs-rich pro-poor growth policies and on the social protection side there is the need to ensure that the social protection floor is available to all.

## Growth, Poverty Reduction and Disaster Risk Reduction

It is important to reiterate that rapid economic growth and reduction of poverty can and do contribute to DRR. People who are better off, better endowed with goods and services, and who have positive rates of saving and investment are, other things remaining the same, better able to manage their lives, take measures to protect themselves and their families from natural hazards and deal with disasters when they occur.

It is equally important to remember that the process of rapid economic growth, even when accompanied by poverty reduction, can increase, rather than reduce, disaster risk. Economic growth may result in unsustainable consumption patterns and environmental degradation; it may cause unplanned urban growth with unsafe settlement patterns; it may result in cropping patterns in agriculture that exacerbate disaster risk; and it may be accompanied by large scale investments in irrigation and power projects that increase productivity but increase risk as well.

Natural disasters are not the only risk that economic actors face; other risks include man-made disasters like chemical explosions and armed conflicts and the extremely important, but often neglected, risks of economic fluctuations induced by developments in domestic and international markets. Apart from this, climate change also contributes to declines and fluctuations in earnings for particular groups, regions or countries. In situations of widespread poverty, when multiple natural, man-made or economic disasters occur in tandem or in sequence, the cumulative impact of multiple risk drivers creates a super driver of disaster risk.

As the ILO points out, the income level of an individual or household has a strong influence on exposure to risks and on the strategies available to deal with those risks.

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<sup>6</sup> In fact the ILO concept of decent work goes much further: “Decent work sums up the aspirations of people in their working lives – their aspirations for opportunity and income; rights, voice and recognition; family stability and personal development; and fairness and gender equality.”

The risks to which the rich and the poor are exposed tend to differ; the international experience indicates, for example, that the rich tend to be less exposed to natural shocks and more exposed to man-made shocks. The strategies available for the poor to mitigate risks are fewer and less efficient than those the rich can adopt. For example, the poor have little access to insurance, either public or private. The coping strategies the poor utilize, such as selling productive assets or sending children to work, have high opportunity costs. Facing such costs and the lack of alternative means to cope with risks *ex post*, poor people are particularly risk averse and thus unable or unwilling to engage in higher risk/higher return activities. In consequence, the poor have less capacity than the rich for resilience. In summary, the probability of restoring a household's income level to that which prevailed before the occurrence of a particular contingency shows a positive correlation with household income.

Low income groups generally face higher levels of exposure to health risks, mainly as a result of poor-quality housing and sanitation, bad nutrition, poor access to clean water, and working in hazardous jobs. They generally face a much higher risk of suffering from psychosocial health problems because they live and work under high levels of environmental stress, arising for example from overcrowding and economic insecurity. They also have to face the stress caused by relatively high levels of ill health and injury, and of infant death within their households. They can least afford the resulting direct and indirect costs, including opportunity costs, when they must pay for treatment and medication.<sup>7</sup>

The chronically poor are particularly vulnerable to risks. Their numbers are estimated to lie in the range 320–443 million people, according to the Chronic Poverty Research Centre, several groups tend to be disproportionately represented among the chronically poor: indigenous people, nomadic and some caste groups, bonded labourers, casual workers, rural workers, women, children, the elderly, widows and households headed by older or disabled people.<sup>8</sup>

According to Chronic Poverty Research Centre report, the condition of permanent, or chronic, poverty tends to be related to *high insecurity* (i.e. insecure environments, no assets or entitlements); *limited citizenship* where they lack a meaningful political voice or political representation; *spatial disadvantage* in that they live in remote areas where there is political exclusion and weak economic integration, or in areas lacking in important resources, all of which limits their social mobility; and *social domination* – chronically poor people are often subject to social relations of power, patronage and competition that can trap them in exploitative relationships or deny them access to goods and public services.

The availability of employment opportunities for the chronically poor is severely limited due to mismatches between the pattern of opportunities available and the complex set of constraints they face. It is now widely accepted that mainstream development approaches, especially microfinance, skills development, the promotion of cooperatives, micro insurance schemes or access to basic social services largely bypass the chronically poor. Guaranteeing a basic means of income to ensure a decent standard of living, at least over some minimum time span, appears in many circumstances to be a key condition for

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<sup>7</sup> Ibid, p.8.

<sup>8</sup> Chronic Poverty Research Centre (CPRC). 2008. *The Chronic Poverty Report 2008–09: Escaping poverty traps*, Northampton, 2008. Also see <http://www.chronicpoverty.org/page/report-2008-09>

enabling them to make the investment required to develop their capabilities, access productive opportunities and escape poverty in a sustainable way.

GAR 2009 has assembled a great deal of evidence to show that disaster risk is associated with poverty. Disasters can result in poverty of individuals, groups and societies; equally, poverty can make individuals, groups and societies disaster-prone. Looking at the latter, it is then obvious that sustainable poverty reduction will directly contribute to DRR since poverty is one cause of the extent and intensity of disasters. However, the elimination of poverty may not remove the problem of vulnerability of significant sections of the population. Substantially raising the income and consumption levels of all vulnerable groups through the creation of productive employment may go some way towards DRR, but, as we shall argue later, there are limits to this process in the context of a market economy. Many other measures like social protection and disaster-reducing investments in rural and urban areas are also needed.

## Poverty and Vulnerability

Income or consumption poverty for an individual or household is usually defined as being below a pre-determined poverty line. Poverty lines are important policy tools especially for targeted public employment programmes and other income support programmes in many countries. They enable identification of those having consumption or income below an acceptable level in a particular year. However, poverty lines in developing countries are usually set too low to provide for reserves to cope with risks. It is important to stress that many of the poor are self-employed or work in family enterprises where, in the absence of public-provided social protection, they and their enterprises need to earn enough for current needs as well as to provide savings and meet contingencies like loss of earning members, markets, production sites and productive assets.

The notion of vulnerability, as distinct from poverty has been gaining ground among development analysts. One approach is keep within the concept of income (or consumption) poverty and to distinguish between poverty (currently being under the poverty line) and vulnerability (the likelihood of income/consumption falling below the poverty line in the future)<sup>9</sup>. Current poverty can be estimated from survey data, but vulnerability requires panel data, ideally for a number of years, to estimate the likelihood of a household or group of households falling below the poverty line in some years.

Typically in most developing countries there is a combination of persistent and transient poverty. Some of the poor now may be non-poor in another year; some of the non-poor may be poor in another year, and some the poor may remain poor in both years. In a rural agricultural economy, if we had data for a famine year and for a bumper harvest year, the comparison would be interesting: many of the poor households in the famine year may be non-poor in the bumper harvest year; but, significantly, there may be households which

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<sup>9</sup> In principle, a similar approach can be followed for other variables like nutrition, school attendance, livestock, land etc.

remain poor in both good and bad years and, of course, others that remain non-poor in both good and bad years.

A study for rural Ethiopia for 1985 and 1989, based on panel data, brings out this point quite dramatically<sup>10</sup>. While the proportion of poor households fell from 61 per cent to 46 per cent, it was made up of a shift of 15 per cent of all households from non-poor to poor status and of 30 per cent of all households from poor to non-poor status, with 31 per cent of all households remaining poor at both time points. A study for Indonesia comparing December 1998 and August 1999 using the same set of households concluded that about 23 per cent were poor while about 45 per cent were vulnerable to poverty.<sup>11</sup> There is, therefore, the strong likelihood that many households move in and out of poverty due to natural disasters and economic fluctuations resulting from covariate or idiosyncratic shocks, affecting all or some households in a given area.

In many developing countries poverty lines are kept fairly low for a variety of reasons: the government would wish to limit its financial obligation to reduce poverty; also, if the proportion deemed poor rises, the tax burden on the residual non-poor (including the rich and the influential) would rise and this would be resisted. However, a low poverty line does not provide for the accumulation of surpluses by the poor in better years to take account of shortages in bad years. For many households, it is these surpluses that permit investment in household enterprises needed to reduce income fluctuations and raise income levels over time.

There is strong case for raising poverty lines in most developing countries. One approach would be to replace the existing poverty line by (i) a (much higher) vulnerability line or (ii) to retain the existing poverty line and add a vulnerability line which represents a level of household/individual income/consumption where the risk of vulnerability is minimized by providing not only for normal consumption needs but also for reserves to meet contingencies like natural disasters and economic fluctuations. Obviously, a higher poverty line or a vulnerability line will substantially increase the numbers below it when compared to the existing poverty line.<sup>12</sup> It means that many more people will need to be assisted to reach an acceptable minimum income/consumption which also protects them against fluctuations in economic activity.

A policy package that ensures that the population below the vulnerability line is reduced to near zero would substantially reduce the impact of hazard-induced disasters and economic fluctuations. Of course, if the fluctuations are very sharp, even those above the

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<sup>10</sup> See the discussion on measuring vulnerability in <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTPA/0,,contentMDK:20238993~menuPK:492141~pagePK:148956~piPK:216618~theSitePK:430367,00.html>

<sup>11</sup> Shubham Chaudhuri, Jyotsna Jalan and Asep Suryahadi, "Assessing household vulnerability to poverty from cross-sectional data: A methodology and estimates for Indonesia," Discussion Paper # 0102-52. Department of Economics, Columbia University, New York, April 2002.

<sup>12</sup> See A Shepherd, R Marcus and A Barrientos, "What social protection mechanisms will help to reduce poverty," DFID Paper on Social Protection, DFID, UK, 2004.

vulnerability line would be adversely affected. Nevertheless, programmes to reduce the population under the vulnerability line would provide at least the identified vulnerable persons with reserves to smooth their consumption and tide over their difficulties.

For illustrative purposes let us assume that in a certain country 40% of the population fall below the poverty line. We further assume that another 30 % have above poverty line income/consumption but do not have the reserves to cope should there be a fall in their income/consumption due to natural disasters or sharp fluctuations in earnings. In other words, about 70 per cent are below the vulnerability line. While data are not available to provide precise estimates for many developing countries in Asia and Africa, this hypothetical picture may not be far from the truth.

Some exercises on Indian data for 2004-05 indicate that while 21.8% were below the poverty line, 76.7% were in the sub-groups that Sengupta et al define as vulnerable, marginal, poor or extremely poor.<sup>13</sup> This approach should not be equated with the use of the vulnerability line as we have defined it, i.e. a consumption or income level that ensures that the individual will have enough over current consumption in some years to be able to smooth consumption successfully over good and bad years. It is nevertheless interesting to check the levels of per capita consumption expenditure are being considered in the Indian exercise. The average daily consumption of those below the poverty line is \$1.20 at purchasing power parity (PPP), while for those above the poverty line but below the vulnerability line is \$2.00.

In order to escape from vulnerability, all those below the vulnerability line (including those under the poverty line) would need to obtain per capita consumption of at least \$2.00 a day. This would not appear to be a high expectation by international standards. Yet for India, the large majority fall below this level. Significantly, only 23% of the population are *above* the authors' vulnerability line. In both the hypothetical example given earlier and the Indian example, a programme package to eliminate vulnerability (defined in any reasonable way) would imply a substantially hike in earning rates for 70 % or more of the population.

We may consider a different example, Indonesia, for which a vulnerability proportion has been estimated in a more scientific way.<sup>14</sup> In 2009, according to the World Bank<sup>15</sup>, Indonesia had a significantly higher Gross National Income per capita of \$ 4,060 compared to the corresponding figure for India of \$ 3,260 (both in terms of purchasing power parity international dollars). Chaudhuri et al have estimated that the proportion vulnerable to poverty in Indonesia to be 45 per cent. A substantial hike in earnings of vulnerable persons would therefore be needed even in Indonesia to smooth consumption between good and bad years. But then this will not be enough to generate any surplus for the recipients over the cycle and would not therefore contribute to the growth of their

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<sup>13</sup> Arjun Sengupta, K P Kannan and G Raveendran, India's Common People: Who Are They, How Many Are They and How Do They Live? *Economic and Political Weekly*, March 15, 2008, pp. 49-63. The official Indian poverty line has been revised since the paper appeared.

<sup>14</sup> See Chaudhuri, et al, op. cit.

<sup>15</sup> <http://siteresources.worldbank.org/DATASTATISTICS/Resources/GNIPC.pdf>

enterprises over time. Again, even though Indonesia as a much higher income level than India, many Indonesians above the vulnerability line would not be sufficiently well off to contribute to the betterment of those below it.

Unless such hypothesized income or earnings shifts are accompanied by significant productivity improvements, it would have serious labour market implications: it could create mass unemployment, and it might make many domestic economic activities (including the production of exportable products) uneconomic. Also the capacity of the remaining population to bear the costs of this measure may be questioned.

While granting that raising incomes to above poverty and vulnerability levels is a desirable goal over time, we need to think a little about alternative ways to simultaneously and speedily reduce vulnerability. It is important to understand that the vulnerability line is not rigid, but will be higher or lower depending on the existence or otherwise of a social protection floor. If an affordable and effective social protection floor has been put in place, then the vulnerability line would be lower. Again, effective measures to reduce risk (including natural disasters and market risks) will lower the vulnerability line.

In other words, while rapid economic growth and income/consumption-enhancing poverty and vulnerability reduction policies and programmes should be pursued vigorously, they need to be complemented by the provision of a social protection floor and by disaster-reducing investments. The ongoing processes of globalization and climate change make this particularly urgent.

## Public Employment Programmes

Public employment promotion programmes have generally been designed to address vulnerability and act as a part of the social protection floor by providing incomes to meet present consumption in the face of a sharp decline in employment opportunities. Increasingly such programmes are run in good and bad seasons or years to achieve multiple objectives. These include building up reserves, including food stocks, to meet future contingencies. They also help to raise wage rates and enable poor households to bargain better in the labour market<sup>16</sup>.

The frequency and amplitude of economic fluctuations, whether due to natural disasters, armed conflicts or economic crises, have been rising over time. Hence, public employment promotion programmes must be in existence at all times and should be so designed that they can be scaled up or down and moved around from one area to another according to need. They have the potential to create investments that contribute to disaster reduction; at the same time they help to keep consumption levels from falling

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<sup>16</sup> For an excellent set of materials on public employment programmes see the ILO International Training Centre, *Meeting a Jobs Crisis: Innovations in Public Employment Programmes*, Turin 2010. [This contains materials for an international course to be held in Turin in November 2010.]

during disaster periods and prevent declines in asset holding and investments in human resources. Public employment programmes should focus more on disaster-reducing investments i.e. the creation of those productive assets which contribute to better recovery and reduce disaster risk.

We briefly examine three important examples of national programmes to create employment which work, explicitly or implicitly, to simultaneously reduce disaster risk significantly. We also briefly examine a programme in Haiti, where the explicit intent was natural disaster prevention.

### India: The National Rural Employment Guarantee Scheme

The Indian Mahatma Gandhi National Employment Guarantee Scheme (NREGS) is a large transparent programme, which reached about 68 million persons in 41 million households in the financial year 2009-10 and provided those employed on average about 24 days of work. In the choice of works to be undertaken, there is an explicit focus on disaster risk reduction. Works relate predominantly to rural connectivity, flood control, water conservancy, drought proofing and irrigation. Since workers under NREGS generally receive a reasonable wage, their ability to bargain in the non-NREGS labour market is better and their reserves of grain and other resources also serve to protect them the impact of hazards and economic fluctuations. Over time, the assets created may be expected to reduce risk in agriculture and raise output levels. Workers in NREGS may benefit if they operate some land and again they may benefit if larger holders of land are able to provide more days of work in the year on their improved land. While works were initially limited to public or common land, now private land can also be developed under the NREGS. This would benefit large holders disproportionately, but smaller holders (including some who also work on NREGS) may also benefit.

A number of questions may be raised about the NREGS and how far it contributes to disaster risk reduction.

1. There is the risk that the NREGS could compete with or work against other on-going public investment programmes, rather than complement them. In the Indian case, the expansion of NREGS should not result in less being spent under the Five Year Plan; instead, the NREGS funds, which have much more flexibility, should be used wherever possible to strengthen, extend and complement the Plan investments. There is scope to link it to other relevant programmes like midday meals programmes, social protection and micro insurance initiatives. This requires coordination between the different agencies involved.
2. It may not be able to take up large-scale work like the implementation of watershed plans where the consent of large numbers of potential beneficiaries are involved and there are a significant number of powerful and well-placed potential losers from the intervention. The experience of implementing watershed

development plans in India, under the government's Watershed Development Project, is instructive in this regard. This is a large project implemented since 1994-95 in about 10,000 watersheds around the country. A number of studies suggest that even in the success cases the project's benefits have been selective and limited. A detailed case study for the state of Gujarat<sup>17</sup> shows those households receiving irrigation benefited the most and the landless the least. There was also no process of negotiation between the landed and landless stakeholders on the various trade-offs in watershed development. The landless gained in the provision of drinking water, but not much in terms of fuel and fodder.

3. It may create a large volume of revolving employment while the work is being done, but it may not result in the creation of many continuing jobs or "sedimented" employment. While attention has been focussed on ensuring that eligible persons secure employment and are paid the wages to which they are entitled, more attention should now be paid to the longer term impacts of the NREGS in improving the production base of the economy and "sedimented" employment. It is argued by some that NREGS should be viewed as principally a social protection measure, but given the volume of public funding, it must also augment the production base and increase long term employment opportunities.
4. The investments created by the programme may not significantly contribute to disaster risk reduction. This does not appear to be the case, as most of the investments are aimed at reducing the impact of drought and flooding by improving rural connectivity, flood control, water conservancy, drought proofing and irrigation. Also evidence for its predecessor, the Maharashtra Employment Guarantee Scheme, suggests that it prevented starvation deaths, but did not significantly reduce poverty.<sup>18</sup>

## Ethiopia: Productive Safety Net Program

Another example of a good public works programme is the Productive Safety Net Program (PSNP) launched in 2005 to help Ethiopia shift from an emergency relief system to a more effective development-oriented safety net. Phase II, running from 2007–09, worked to consolidate the gains<sup>19</sup>. Both projects were designed to increasingly provide cash rather than food support. The first step was to create labour-intensive public works so people could earn money and solve their own food insecurity. Next, at-risk

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<sup>17</sup> Amita Shah, *Who Benefits from Participatory Watershed Development? Lessons from India*, International Institute for Environment and Development, Gatekeeper Series no. 97, London, 2001.

<sup>18</sup> See Amita Shah and Aaasha Kapur Mehta, *Experience of the Maharashtra Employment Guarantee Scheme, Are there lessons for the NREGS?* Working Paper No. 41, Chronic Poverty Centre, Indian Institute of Public Administration, New Delhi, n.d.

<sup>19</sup> See

<http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/0,,contentMDK:21395349~menuPK:64282137~pagePK:41367~piPK:279616~theSitePK:40941,00.html>

households—including orphans, pregnant mothers, the elderly, and people living with HIV/AIDS—were identified and given grants.

An important distinction made in Ethiopia is between two kinds of food insecurity. The “unpredictably food insecure” (UFI) are those who face transitory food deficits due to erratic weather or other livelihood shocks, and the “predictably food insecure” (PFI) who face food deficits on more continuing basis. The UFI are provided for through emergency appeals while the PFI are covered under the PSNP.

Under the PSNP, the PFI are further divided into those with able-bodied members who are provided with work through public works and those, without such members, who receive direct support in cash or food. The intention was to provide the PFI with these kinds of support for a period of 5 years and to enable them to subsequently “graduate” out of the programme over time, although it appears that the latter may not be feasible for quite some time..

The project reached about 5 million persons in 2005, expanded to more than 7 million in 2006 and currently covers 7.6 million rural inhabitants. The total number of beneficiaries is just under 10% of the entire population. Up to 192 million paid workdays have been generated through community projects that address some of the roots of food insecurity by rehabilitating severely degraded land and creating productive community assets—such as terraced fields, feeder roads, and small-scale irrigation systems.

The aims of PSNP include protecting household assets by preventing poor households from falling further into destitution, being vulnerable to shocks and dependent on external assistance. At the same time it aims to create community assets through public works that increase the productivity of land, through soil and water conservation and watershed development including hillside terracing, tree planting and construction of ponds. Investments are also made in developing other community assets like schools, clinics and rural roads. However, the PSNP offers wages well below market wages as it does not aim to raise on-going wage rates in the somewhat limited rural labour market.

The PSNP has improved food security among participating households; expanded individual asset bases; raised agricultural productivity; improved community water supplies through construction of conservation measures that reduced surface runoff, increased infiltration, and raised groundwater levels, thereby enhancing springs and raising stream base-flows; and, family health also improved. The PSNP has thereby expanded disaster-reducing investments

A particularly relevant finding was that the project played a vital role in warding off famine. In 2008, Ethiopia faced a potentially devastating crisis from a vicious circle of drought, food shortages and high food prices. An estimated 12 million people were affected. The Productive Safety Net Program was a major part of the government’s response in rural areas. The project used its contingency budget of US\$40 million to provide urgent assistance to almost 1.5 million individuals outside of the project, permitting people to survive until the next harvest. In a dire emergency, the new approach

proved effective—providing a safety net for millions of Ethiopia’s rural poor. One may also infer that in the event of less severe natural hazards, the disaster-reducing investments made under the projects would ensure that the impacts would be greatly reduced.

### South Africa: Expanded Public Works Programme

The South African Expanded Public Works Programme (EPWP)<sup>20</sup> has been in operation since 2004. It is a nationwide programme to “draw significant numbers of the unemployed into productive work, so that workers gain skills while they work, and increase their capacity to earn an income once they leave the programme”. It was based on the principle that the work undertaken must address large government prioritised deficits in infrastructure and social and environmental services (in line with line budgets) without fuelling fears of displacement within and casualisation of the public sector. The Programme had no dedicated budget or means for spending outside the existing budgets. It could not therefore ensure that labour using methods were used. The Department of Public Works was held accountable for the Programme, but it did not control the budget or the implementation process.

The focus was on four broad sectors:

- Infrastructure: mostly provincial and local infrastructure suitable for the use of labour intensive methods; roads, water provision, sanitation, schools, parks, sports fields
- Environment: Removal of invasive alien vegetation (Working for Water), fire protection, wetland rehabilitation, greening, coastal cleaning etc.
- Social: Early Childhood Development, Home and Community Based Care
- Economic: Small Enterprise Development through government procurement.

Several items in the above list, especially under the first two headings may be characterised as disaster-reducing investments. However, there is no discussion in the available documents of their efficacy in disaster prevention/ reduction.

Wages were not set on a uniform basis by departments, provinces and municipalities and were in general not intended to draw workers away from existing jobs. The intention was to provide training for all those who worked on public works under the Programme, but the results were poor. Little information is available on the quality of the assets created by EPWP and their contribution to DRR. In 2006-07, the main outputs and activities of

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<sup>20</sup> Presentation by Maikel R. Liew-Kie-Song, (Former Chief Director EPWP Unit, SA) at the Conference on Employment Guarantee Policies, 22 June 2009, Levy Institute, NY, USA. (Google cache version) See [http://www.levyinstitute.org/pubs/conf\\_june09/conf\\_june09\\_files/presentations/Session1b\\_Maikel\\_Liew-Kie-Song.pdf](http://www.levyinstitute.org/pubs/conf_june09/conf_june09_files/presentations/Session1b_Maikel_Liew-Kie-Song.pdf)

the Programme were under the heads of infrastructure and environment, and we may assume that much of it was disaster –reducing.

In 2007-2008 the EPWP provided work for 440 thousand persons or roughly 11 per cent of the unemployed under the official definition. For the second phase, the target was to create 1.5 million jobs in 2013-2014, providing 100 days of work per work opportunity and ensuring the payment of minimum wages. The emphasis was shifted towards employment creation as opposed to training.

### The three programmes: a comparison

While there are similarities in the programmes, there are significant differences in their perceptions of the problem and in the approach to implementation. In all three, the works to be undertaken tend to be disaster reducing in nature; they target the poor; they provide work opportunities for a good part of the year, but the group catered to in the NREGS is self-selected in rural areas and is under guarantee, under PASDEP they are specifically identified as food-insecure and under EPWP they are part of the unemployed. The NREGS offers the minimum wage; the other two do not, although the EPWP is now moving towards offering the minimum wage.

An important point about the NREGS is that it provides a guarantee of employment of 100 days for one member of the rural family each year at a prescribed wage. In this respect it is sometimes regarded as a social protection measure, i.e. it guarantees income (through work) in the event of a decrease in current income. It may be regarded as a conditional cash transfer, the condition being that the prescribed work is done. The drawback in such a perspective is that the assets created may be regarded as a mere by-product and inadequate attention given to the assets created by NREGS. Since the assets created would be typically disaster reducing in nature, their quality remains a matter of concern from a DRR perspective.

The EPWP has tried to provide training as a component of project activities, but this has not been very successful as the training is of short duration. There remains a need to provide training and skills that significantly raise the income of the beneficiary and reduce vulnerability to disaster of the individual and the community. Training in safe construction should be provided through public employment programmes and other means, and it should be adapted to the nature of the hazards in a particular region.

It may be worth experimenting with the provision of training vouchers, instead of providing work opportunities to selected beneficiaries. While this would allow them to seek out suitable training among the programmes offered by different training providers, it would require a considerable reorganization of the current market for training to be effective. It may be possible to make a start in urban areas.

The NREGS is not based on donor funding like the PASDEP and unlike the EPWP it is not limited to existing departmental budgets. Also, NREGS and PASDEP appear to be better coordinated. Generally, the disaster risk reducing nature of asset creation needs to

be made more explicit and the assets that are created must be assessed explicitly from that standpoint.

Public employment programmes have tended to focus on rural areas, where it is believed the population is more settled and identification of individuals and groups is better. However similar programmes should be launched in urban areas, since there is enormous scope for upgrading the infrastructure and facilities in urban areas and relocating slums and other unsafe settlements.

It is well known that landslides, earthquakes, cyclones, and disease severely hit densely populated poorly planned urban settlements. The affected persons are typically the urban poor with little or no rights to the land on which their homes are located. Also traditional social support mechanisms available in rural areas are often lacking. In urban areas there is a direct link between labour-based public works and DRR. An urban public employment programme would reduce poverty and vulnerability directly through income flows and indirectly it would reduce disaster risk and promote healthy and safe environments.

#### Haiti natural disaster prevention programme

In Haiti the UNDP, WFP and ILO developed a demonstration project on how to prevent natural disasters by environmental protection and employment creation in the Gonaives Region.<sup>21</sup> The project contributed to set up a model combining at the same time the concern of employment creation and income generation for local population, and environmental protection and prevention of natural disasters. This model can now be easily reproduced at broad scale or in other areas supported by the government or other development partners.

The specific objective was “to rehabilitate the extremely fragile and weakened environment of Gonaives by implementing water and soil conservation schemes using labour-based techniques”. This was an area affected by Hurricane Jeanne in 2004. Environmental protection was an important aim, so that the livelihoods of future generations could be secured, water and soil was to be conserved for future use, local resources including labour were to be used to promote employment and the “green jobs” approach was to be applied. Among the project’s achievement during the period March 2006 to December 2007 were capacity building among local authorities; erosion control; slope protection; extraction of rocks and creation of check dams; afforestation; reshaping of the river bed, and correcting the slope of water courses. In the process over 329 thousand work days of employment were created and wages in cash and kind distributed. This project is quite remarkable for its explicit focus on DRR and area-based environment protection. At the same time, it has contributed to local employment and built up resilience among the local communities and groups.

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<sup>21</sup> See ILO Employment Intensive Investment Programme, <http://www.ilo.org/public/english/employment/recon/eiip/countries/americas/haiti.htm>

## Social Protection

The term *social protection* is often interpreted as being broader than social security and includes, in particular, protection provided between members of the family or members of a local community. However, it is also sometimes used with a narrower meaning than social security i.e. comprising only measures addressed to the poorest, most vulnerable or excluded members of society. In many contexts, the term “social security” and “social protection” are used interchangeably. In this report, following ILO usage, “social protection” has the following aspects: (1) as “protection” provided by social security in case of social risks and needs; and, (2) in relation to the Social Protection Floor as envisaged by the family of UN agencies to include not only social (security) transfers, but also access to a range of basic social services.<sup>22</sup>

The key features which the ILO seeks to promote in national social security systems are:

- *Universal coverage of income security and health systems:* All (permanent and temporary) residents of a country should have gender-fair access to an adequate level of basic benefits that lead to income security and comprehensive medical care.
- *Benefits and poverty protection as a right:* Entitlements to benefits should be specified in a precise manner so as to represent predictable rights of residents and/or contributors; benefits should protect people effectively against poverty; if based on contributions or earmarked taxes, minimum benefit levels should be in line with the Social Security (Minimum Standards) Convention, 1952 (No. 102), or more recent Conventions providing for higher levels of protection, and the European Code of Social Security of the Council of Europe.
- *Collective “actuarial equivalence” of contributions and benefit levels:* The benefits to be received by scheme members should represent both a minimum benefit replacement rate and a minimum rate of return in case of savings schemes, which in turn must adequately reflect the overall level of the contributions paid; such minimum levels should be effectively guaranteed, preferably by the State.
- *Sound financing:* Schemes should be financed in such a manner as to ensure to the furthest extent possible their long-term financial viability and sustainability, having regard to the maintenance of adequate fiscal space for the national social security systems as a whole and individual schemes in particular.

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<sup>22</sup> International Labour Office, Social Security Department, *Extending social security to all: A guide through challenges and options*, Geneva, 2010, pp.159-160. Also available at <http://www.ilo.org/public/english/protection/secsoc/downloads/policy/guide.pdf>. This section draws heavily on this excellent report.

- *Responsibility for governance:* The State should remain the ultimate guarantor of social security rights, while the financiers/contributors and beneficiaries should participate in the governance of schemes and programmes.

The ILO and several other agencies are committed to a Social Protection Floor which corresponds to a set of basic social rights, services and facilities that the global citizen should enjoy.<sup>23</sup> It can be seen as a core obligation of ensuring the realization of minimum essential levels of rights embodied in human right treaties. The Social Protection Floor could consist of two main elements that help to realize these human rights:

1. Ensuring the availability, continuity, and geographical and financial access to essential services, such as water and sanitation, food and adequate nutrition, health, education, housing and other social services such as life and asset saving information.
2. Realizing access by ensuring a basic set of essential social transfers, in cash and in kind, to provide a minimum income and livelihood security for poor and vulnerable populations and to facilitate access to essential services. It includes social transfers (but also information, entitlements and policies) to children, people in active age groups with insufficient income and older persons.

The principal aim then is to ensure that social protection is universal, adequate, well funded and conceived as a right which the State has to enforce. It goes without saying that if these conditions are met the individual and household would be able to smooth consumption over time in the face of natural hazards and would be willing to take reasonable risks to increase output and productivity. The evidence available, according to the ILO, suggests that even in poor countries, social protection is affordable and would remain so even with ageing of the population.

We may look briefly at some country experiences. India is trying to extend social protection to all its citizens. The informal economy comprises some 93% of the total labour force i.e. around 370 million workers, contributes some 63% to the GDP. It is estimated today that 90% of the entire population (some 950 million) is still deprived of any kind of social protection services, thus remaining exposed to the multiple risks affecting their daily lives and inhibiting their development initiatives. Among them, the most disadvantaged groups remain caught in a continuing cycle of poverty and vulnerability. The Government has pledged to ensure, through social security, health insurance and other schemes, the welfare and well-being of workers, particularly in the informal economy. Among the many recent initiatives taken by the Central Government, with regard to the social security needs of the workers belonging to the Below Poverty Line (BPL) group, perhaps the most important one has been the adoption of the Social Security for the Unorganized Workers Act, 2009 and subsequent allocation of Rs.1000 crores (USD 215 million) for launching its implementation.

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<sup>23</sup> See GESS, Global Extension of Social Security, <http://www.socialsecurityextension.org/gimi/gess/ShowTheme.do?tid=1321>

Following the Asian Financial Crisis a review of social protection in Thailand was done by the ILO and based on its recommendations the existing system has been expanded to cover retirees and informal sector workers. In October 2004 the Government of Indonesia enacted Law No. 40/2004 which calls for the establishment of a comprehensive national social security system. It mandates the creation of a number of social security schemes including old age pension, old age savings, national health insurance, work injury insurance, and death benefits for survivors of deceased workers.<sup>24</sup>

In Argentina, social security benefits are being extended to groups affected by the economic crisis (2001-02) and will include coverage for old age, disability, survivors, occupational hazards and unemployment. In Peru, the ILO is supporting the preparation of a project to strengthen the Health Care Insurance Institution, to extend coverage to unprotected population groups and to improve the scheme's management. In Costa Rica, a tripartite agreement was reached to assure the sustainability of the pension scheme in coming years.

There has been also progress in the extension of social security coverage to groups which have traditionally been excluded or marginalized. In Honduras, with a strong emphasis on social dialogue, new and innovative ways have been found of insuring rural workers, domestic workers, home workers, independent workers, members of cooperatives, etc. In Paraguay, social security coverage has been successfully extended to domestic workers, and in Chile there has been extensive dialogue and debate on extending social protection to independent workers. In Brazil, the Government is extending employment insurance to workers released from forced or slave labour.<sup>25</sup>

In many parts of the world, the economic crises of the turn of the last century, rather than natural disasters, has been the major reason for social protection to be extended to vulnerable groups. In the process those suffering from the risk of periodic natural disasters have benefited and will continue to do so in the future. It is important to stress that the social protection floor of social transfers is globally affordable at virtually any stage of economic development, even if the funding is not yet available everywhere.<sup>26</sup>

## Microcredit and Other Credit-based Programmes

Another approach to employment creation, income growth and asset expansion is through credit programmes. Macroeconomic policies that favour growth accompanied by the greater availability of bank credit especially for small and medium industries will contribute to job growth in the organized sector, with linkage effects on the rest of the

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<sup>24</sup> See J Krishnamurty, *Learning from the 1997-1998 Asian Financial Crises: The ILO Experience in Thailand and Indonesia*, Employment Report No. 3, Employment Sector, ILO, Geneva, 2009.

<sup>25</sup> See [http://www.ilo.org/global/About\\_the\\_ILO/Media\\_and\\_public\\_information/Press\\_releases/lang--en/WCMS\\_069176/index.htm](http://www.ilo.org/global/About_the_ILO/Media_and_public_information/Press_releases/lang--en/WCMS_069176/index.htm)

<sup>26</sup> See GESS, Global Extension of Social Security, <http://www.socialsecurityextension.org/gimi/gess/ShowWiki.do?wid=31>. The examples given on this website cover attempts to provide a comprehensive social protection floor as well as initiatives to provide conditional and unconditional cash transfers as well as basic health care.

economy. At the same time, but bank lending, directly or through intermediaries, to the unorganized or informal sector has also to increase.

To the extent that credit-based programmes increase incomes in different production sectors and diversify production patterns, they are drivers of DRR, but they can be disaster risk reducing in other ways as well. Differential credit policies, for instance, can be used to ensure better spatial location of economic activity and more environment-friendly growth.

Microcredit schemes and micro-insurance are useful in providing resources to producers in the informal sector to expand, upgrade and diversify their production, maintain stocks and have access to liquid assets. They also provide some protection through disaster loan funds against enterprise failure, asset loss or damage due to natural disasters. Microcredit groups have been found to play a role in providing early warnings of disasters to members and others. Microcredit or self-help groups also provide a network through which ideas relating to disaster-preparedness can be disseminated and loans can be used to make disaster-reducing investments in safer housing and better preparedness in areas subject to frequent natural hazards, particularly of the rapid onset kind.<sup>27</sup>

## Micro Insurance

Micro insurance through partnerships with public and private institutions, governments and employers' and workers' organizations has the potential to provide protection and security to people who are usually excluded from formal arrangements. It enhances the access of the working poor to financial services and enables them to withstand shocks, build their assets and link into the economy more effectively.

Across the world several different packages of micro insurance have been and are being tried, catering to very different situations and circumstances. In West Africa, a French NGO, Centre International de Developpement et de Research (DIDR) developed a health insurance with maternity cover. The premium is paid by all persons in the village and the administrative costs are low. In India, SEWA Bank (part of a trade union and representative organization of self-employed women) offers three kinds of insurance to its members: death, health and assets. Some 200,000 women are covered under this scheme.<sup>28</sup>

Micro insurance and microfinance enable individuals to progressively use smart cards and other modern methods to access a whole range of financial services, use their savings productively, manage risk and produce efficiently. Many new ideas are being tested currently in this exciting field. One obvious application being attempted is to link microcredit and micro insurance to payments made under the public employment and

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<sup>27</sup> See Joan Parker and Geetha Nagarajan, "Can Microfinance Meet The Poor's Financial Needs in Times Of Natural Disaster?" May 2000, [http://www.bwtp.org/arc/mfdm/Web%20Resources/MF\\_%20Natural%20Disasters/1040%20can%20mf%20meet%20financial%20needs%20in%20times%20of%20nd.pdf](http://www.bwtp.org/arc/mfdm/Web%20Resources/MF_%20Natural%20Disasters/1040%20can%20mf%20meet%20financial%20needs%20in%20times%20of%20nd.pdf)

<sup>28</sup> See ILO, *Small Change, Big Changes: Women and Microfinance*, ( pamphlet) Geneva, n.d.

other programmes. In fact it is observed that government-to-persons payments (G2P payments) cover about 170 million poor persons worldwide. If these are efficiently managed, poor individuals can get what is due to them, invest their savings and insure against risk.<sup>29</sup>

## Concluding Remarks

A number of important points made in the paper may be reiterated.

- ✓ As is well known, disasters of all kinds are increasing in terms of both frequency and amplitude of fluctuations and their spread and impacts have been extremely severe in a rapidly globalizing world.
- ✓ The centrality of employment and employment-related relationships to natural disasters and disaster risk reduction cannot be overemphasized. The growth process has to become more jobs rich and pro-poor so as to raise incomes and enable the bulk of the population to rise above the level of vulnerability. Ideally this approach to growth, employment and DRR should be embodied in each country in a National Employment Policy or National Development Policy with clear priorities and means of achievement.
- ✓ Macroeconomic policies in many countries need to be more focused on promoting growth and providing credit especially to micro, small and medium scale industries which are known to be creators of jobs.
- ✓ All developing countries which face significant disaster risks should set up and maintain a public employment programme which can be expanded or contracted as needed. Preparedness plays a major role in ensuring that a hazard does not turn into a disaster. Such a programme covering both rural and urban areas could take the form of providing some kind of guarantee of remunerated work so that beneficiary households would have a means of maintaining consumption levels, assets and human resources, in bad years.
- ✓ Public employment programmes must explicitly be visualized as DRR instruments. Their outcomes must also be evaluated in terms of DRR.
- ✓ Social protection is now being recognized as a basic right of all workers and their families and indeed of all persons in society. The ILO and several other international bodies have developed the concept of a social protection floor, below which nobody should fall. By social protection programmes which are

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<sup>29</sup> See Mark Pickens, David Porteous and Sarah Rotman, *Banking the Poor via G2P Payments*, CGAP/DFID Focus Note No. 58, December 2009.

affordable and well managed and by a host of measures to ensure that the poor and vulnerable receive benefits and transfers, we can reduce significantly the effects of market and disaster risk. This in turn makes it possible for individuals, households and other groups to take up investments and activities that are more remunerative, even if more risky as well.

- ✓ Microcredit for smaller producers must be expanded as it can not only promote diversification (and hence risk reduction) but also contribute to income growth, social cohesion and a means for undertaking DRR measures.
- ✓ Micro-insurance should be expanded to cover the risk of small producers. It will also help to build social cohesion and self-help among groups of people. This is a relatively new area and there are not many good examples yet where micro-insurance has been successful on a large scale.
- ✓ The response to disaster and disaster reduction typically requires active State involvement. Many measures that we have discussed create disaster preparedness and thereby contribute to DRR. Others create disaster reducing investments or institutions and practices. All of these reduce the extent to which hazards become disasters. An active State role is especially necessary given that a large proportion of natural disasters tend to simultaneously affect large numbers of similarly situated people (i.e. that the risks are often covariant rather than idiosyncratic).
- ✓ DRR requires an active State involvement in regulatory measures like implementing building codes, area planning, resettlement and relocation of economic activity, as well as in direct State action to run public employment programmes, fund training in relevant skills, and support social protection, microcredit and micro-insurance programmes until they can stand on their own.

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