



सत्यमेव जयते

STANDARD OPERATING PROCEDURES POST DISASTER NEEDS ASSESSMENT INDIA



Resilient India - Disaster free India

National Institute of Disaster Management (NIDM)
(Ministry of Home Affairs, Government of India)



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A-wing, 4th Floor, NDCC-II Building, Jai Singh Road, New Delhi - 110001

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POST DISASTER NEEDS ASSESSMENT INDIA**

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We welcome receiving information and suggestions on its adaptation or use in actual training situations. The content of this document are solely those of the author(s).

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संदेश

मुझे यह जानकर अत्यंत हर्ष हो रहा है कि राष्ट्रीय आपदा प्रबंधन संस्थान, गृह मंत्रालय ने आपदा से हुए नुकसान का वैज्ञानिक तरीकों से आकलन सम्बन्धी अंतर्राष्ट्रीय स्तर का साधन विकसित किया है।

भारत विश्व में प्राकृतिक आपदाओं से सबसे अधिक प्रभावित होने वाले देशों में से एक है। हमारी भौगोलिक स्थिति कुछ इस प्रकार की है कि आपदाओं का प्रकोप और इसका प्रभाव तीव्र एवं अत्याधिक होता है। हमारे देश में आपदा के पश्चात इससे होने वाले नुकसान का आकलन पारम्परिक तरीके से होता रहा है। इसका सही आकलन वैज्ञानिक तरीके से होना चाहिए।

माननीय प्रधानमंत्री, श्री नरेन्द्र मोदी जी ने एशियन मंत्रीगण सम्मेलन में आपदा प्रबंधन को वैज्ञानिक आधार पर करने हेतु 10 बिंदुओं को चिन्हित किया। अभी हाल ही में राष्ट्रीय आपदा विमोचन दल द्वारा आयोजित कार्यशाला में माननीय गृह मंत्री, श्री अमित शाह जी, ने उन्हें दोहराते हुए सभी प्रतिभागियों से उसे सुनिश्चित करने तथा इन नीतियों पर कार्य करने को कहा।

मुझे विश्वास है कि वर्तमान प्रकाशन, जो चार भागों में प्रकाशित हो रहा है, का लाभ प्रत्येक राज्य और केंद्र के मंत्रालयों को मिल सकेगा। इस प्रकाशन को आकलन हेतु संदर्भ स्वरूप प्रयोग में लाया जा सकता है। वर्तमान में देश के कुछ राज्यों में इस विधि को आपदा के पश्चात होने वाले प्रभावों का आकलन किया है और इसके आधार पर दीर्घकालीन पुनर्निर्माण की नीति विकसित करके आगे बढ़े हैं। इस ओर राष्ट्रीय प्रबंध संस्थान का यह प्रयास सराहनीय है।

मैं एक बार पुनः इस अंतर्राष्ट्रीय स्तर का कार्य करने हेतु राष्ट्रीय आपदा प्रबंधन संस्थान को हार्दिक बधाई देता हूँ।

दिनांक : 16 सितम्बर, 2019

स्थान : नई दिल्ली।


(नित्यानन्द राय)



कमल किशोरे
सदस्य
Kamal Kishore
Member



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3rd September, 2019

Message



Over the last twenty years, the practice of post-disaster recovery has undergone significant transformation. This change is characterized by three features: first, there is much greater focus on multi-sectoral, comprehensive recovery; second, there is much greater focus on “building back better,” not only in physical terms but also in terms of better socio-economic conditions; and third, there is much greater focus on recovery outcomes rather than on inputs. For example, in the education sector, we measure success in terms of enabling access to a safe and healthy learning environment as opposed to the number of classrooms built.

This transformation in the practice of post-disaster recovery is underpinned by the development of post-disaster assessment methodologies. We have come a long way from assessing only the damages and losses from disasters to assessing the needs of the affected communities. In this context, I congratulate NIDM in systematizing the practice of post-disaster assessments in the form of this volume. This is an important contribution to the practice of disaster risk assessment and ultimately post-disaster recovery.

I am sure this will go a long way in meeting the needs of multiple stakeholders – local governments, non-governmental organizations, academic institutions – who are supporting post-disaster recovery in the country.

Kamal Kishore

nidm

Resilient India - Disaster free India

Maj Gen Manoj Kumar Bindal
VSM

Executive Director



राष्ट्रीय आपदा प्रबंधन संस्थान

(गृह मंत्रालय, भारत सरकार)

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Foreword



Disaster disrupts development and the dividends of development get seized. For regaining the growth gaps, created due to disasters, long term recovery becomes the only choice. In the light of understanding the disaster impact on economy Post Disaster Need Assessment is required to be done. PDNA also facilitates in understanding the impact of disaster in terms of direct and indirect loss. In resource gap scenario, PNDA is a good tool to be adopted by the states.

National Institute of Disaster Management has developed PDNA tool customized to Indian conditions under the National Cyclone Risk Mitigation Project of Government of India which was implemented by National Disaster Management Authority and funded by The World Bank. I would like to mention that it's a very pragmatic and easy to use tool. NIDM has also developed a user manual and professional development Modules for using the PNDA tool.

This is going to be the new beginning in the area of disaster management impact assessment for understanding the real impact of disaster event holistically. It will not be an exaggeration in saying that this process would help in setting new era of development environment of the disaster affected states in the post disaster scenario and in development planning by the sector.

I complement Prof. Santosh Kumar and Shri Shekher Chaturvedi, NIDM and other team members who have facilitated the process.

Manoj Kumar Bindal

आपदा प्रबंधन महाविचार: पूरा भारत भागीदार

Acknowledgement

Indian states are submitting their memorandum of loss assessment in the post disaster scenario. The assessments are done with a conventional tool while applying across the sectors. The memorandum of the states are based on the direct loss basis which is largely calculated on the replacement cost basis on current price. The memorandum does not cover the indirect loss i.e loss in flow or revenue loss basis (indirect cost). NIDM has completed the tools for calculating indirect loss, opportunity cost loss and its impact on the macro economy of the affected state. The current tool is an improvisation on the international tool initially developed by UNECLAC (United Nation Economic Commission of Latin American Countries). It has been customized to Indian system and procedure and been made easy to use by the officials at the local levels. The study was proposed by NIDM to National Disaster Management Authority and subsequently examined and proposed by NDMA to DM Division of MHA and the World Bank for its approval and the funding support. The World Bank funded the study and NIDM hired the services of Asian Disaster Preparedness, Bangkok. I got the opportunity of leading and coordinating the study and Shri P. G. Dhar Chakrabarti, the then Executive Director of NIDM guided the team extensively. I am also grateful to subsequent executive directors of NIDM Dr. Satendra, Mr. Bipin Mallick, Mr. Sanjeev Jindal, Mr. B. H. Anil Kumar, Ms. Rajini Sekhari Sibal and Maj. Gen. Manoj Kumar Bindal for continuously supporting for its implementation and its institutionalization.

NIDM acknowledges the support by all the former members of NDMA – Gen. N. C. Vij, Vice Chairman, NDMA, Mr. K. M. Singh, Mr. Vinod C. Menon, Mr. V. K. Duggal, for approving the proposal. We extend our thanks to Shri Bramha, the then Additional Secretary of NDMA. NIDM also acknowledges the support provided by Shri S. Vasudeva, Ms. Mamta Kundra, Mr. Pradeep Kumar, Shri Pradhan and Shri S. S. Jain. NIDM also acknowledges the support of Shri R. K. Jain, Shri Kamal Kishore, Gen. N. C. Marwah and Shri D. N. Sharma members of NDMA.

NIDM also acknowledges the support and guidance provided by Ministry of Home Affairs especially Shri R. K. Singh, the then Union Home Secretary and subsequent home secretaries Mr. L. C. Goyal, Mr. Rajiv Goswami Mr. Rajiv Mahrishi. NIDM also acknowledges Mr. Rajiv Guaba for his support.

NIDM is thankful to the team of The World Bank Shri Saurabh Dani, Shri Deepak Singh, and Shri Anup Karanth for their continued support in the completion of the study.

Mr. Aslam Parvez, ADPC, and his team members who were engaged for the study and contributed.

NIDM acknowledges Dr. K. J. Ananda Kumar, Capt. Vandana Srivastava, Ms. Rubal Saroha, Mr. Shekher Chaturvedi, Ms. Priyanka Chowdhary, Shri Priyank Jindal and Mr. Rajesh Kumar Singh who supported for the completion process of the study. NIDM extends thanks to our Secretarial support from Ms. Rani Dhakad, Mr. Ramesh Kumar, and Mr. S. S. Bisht, Mr. A. K. Pandey, Shri Santosh K. Tiwari, Shri Rajiv Kumar and administrative support staff. NIDM also acknowledges support of state governments for supporting the endeavor of NIDM.

NIDM acknowledges the support and suggestions provided by Members of Technical Steering committee Mr. M. P. Sethy, Mr. Govindrajan, Mr. T. N. Gupta.

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Post Disaster Needs Assessment (PDNA) Tools India

National Institute of Disaster Management, Ministry of Home Affairs, Government of India has developed the **Post Disaster Needs Assessment (PDNA) Tools for India** under the National Cyclone Risk Mitigation Project assisted by the World Bank. The objective of these tools is to establish a standardized mechanism based on scientific approach for conducting post disaster needs assessment for long term recovery and reconstruction. The newly developed tools are based on the existing damage assessment system in India and an internationally-accepted methodology which has been used worldwide and adopted by the United Nations Development Group (UNDG), the European Union (EU) and the World Bank (WB) which signed a joint declaration in 2008 on Post-Crisis Assessments and Recovery Planning.

The ADPC team worked by Mr. Aslam Parvez.

The tools have been prepared with the technical assistance of the Asian Disaster Preparedness Center (ADPC). The PDNA India tools have three parts as follows;

1. PDNA India Handbook
2. PDNA India Manual
3. PDNA India SoP

Disclaimer

This document is developed based on the inputs received during various consultative meetings, state visits, individual interviews, and the literature review by the PDNA India Consultants. Any discrepancies are unintended. Care has been taken in factual descriptions and data sources. The document remains open for any corrections in facts, figures and visuals.

Rationale for the Indian PDNA Tool

The Post Disaster Needs Assessment (PDNA) has been adapted for India, on the basis of best current international practices and customized to local conditions, which will enable the comprehensive and scientific assessment of recovery and reconstruction needs on the basis of a thorough analysis of disaster effects and impacts. This methodology should not be seen as a replacement or substitute for the existing approach which States use for the development of the Relief Memorandum. It should be noted that the methodology also includes, a separate and additional area of disaster management, which is recovery and reconstruction following a disaster while building resilience to future events. To undertake this new methodology, a core team of sector specialists from State and National levels must be trained. In this way the burden of work of the Revenue Commissioners will not be increased.

A thorough analysis has been made of the strengths and weaknesses of the existing system for estimation of disaster effects and impacts and of recovery and reconstruction needs assessment in India.

This analysis, conducted in light of current international practices, reveals that the existing system in India may be described as relief-centered. While the existing system is efficient in defining the amounts of relief assistance to be provided to affected population in accordance to previously-defined criteria, and enables the prompt disbursing such assistance to disaster-affected people, it does not enable the comprehensive and systematic estimation of overall disaster impact nor the scientific estimation of recovery and reconstruction needs and the estimation of financial requirements for such purpose. The data collected for such response assessments is insufficient to enable a full and scientific analysis of the consequences of the disaster on living conditions, quality of life and on the socio-economic development of those who are affected. As a result, recovery is left almost exclusively to the initiative and the capacity of each affected person and takes an unnecessarily long time, thus frustrating people's aspirations and delaying their return to normal levels of well being.

In addition, relief assistance at the present time is only provided to part of the affected population – i.e. mostly to the poorer strata of the affected population – and not all affected sectors of the economy are included, which is not conducive to a prompt recovery. Furthermore, the amounts of response assistance are clearly insufficient for affected families to enable them to rebuild their destroyed assets; in the absence of other sources of capital for reconstruction, people resort to rebuild their homes and other assets applying lower standards of quality and using inadequate construction materials and disaster risk – rather than being reduced – is increased after disasters.

Sectors of economic activity under private ownership are not included in the existing system of disaster assessment, apparently because it is assumed that they have sufficient savings and/or insurance to meet post-disaster requirements. This assumption is evidently only partially valid since not every enterprise – especially small to medium size companies – has such a capacity and insurance is only held by one out

of seven such entities. Leaving out such large portions of the economy – and it is to be remembered that publicly-owned activities represent only 20 per cent of all activities in the economy – further limits recovery efforts and have a negative bearing on people’s livelihoods, since many jobs are under the purview of the private sector that is unable to recover promptly. Households thus lose employment and income for a longer time after disasters.

Data, on disaster effects collected on the basis of the existing system, is insufficient to enable a full analysis of disaster impact in macro-economic and macro-social terms, despite the fact that India has an excellent database on socioeconomic indicators. Thus, assessments do not include an examination of social and economic disaster impact, which may be used as the basis for defining needs for recovery and disaster-resilient reconstruction.

Analyses conducted under the India PDNA study reveals that overall socio-economic growth in the country and in the disaster-affected States is hindered by the impact of disasters. In many cases, gross domestic production slows down and the State and Central government fiscal position deteriorates after disasters in view of disaster-induced diminishing tax receipts and increased expenditures. At the personal or household level, disasters induce significant reductions in income through losses in employment and livelihoods, increase costs of living due to scarcity and inflation, thereby worsening quality of life and human development.

Therefore, there is a need for India to be more recovery and reconstruction oriented, and the government should be more concerned about achieving a prompt and all-inclusive recovery as well as disaster-resilient reconstruction that involves reduction of disaster risk. This does not require that the government should assign financial resources to cover private sector needs; it only means that the government (at central and State levels) should endeavor to assess disaster impact for the entire economy and society, so that both public and private sectors may (simultaneously and in a concerted fashion) define and finance, recovery and reconstruction after disasters.

Acronyms

ADPC	Asian Disaster Preparedness Center
ASSOCHAM	Associated Chambers of Commerce and Industry of India
CDRN	Corporate Disaster Resource Network
CII	Confederation of Indian Industry
CRC	Central Review Committee
CSO	Central Statistical Organization
CWC	Central Water Commission
DaLA	Damage and Loss Assessment
DDMA	District Disaster Management Authority
DES	Directorates of Economics and Statistics
DM act	Disaster Management Act
DRR	Disaster Risk Reduction
FC	Finance Commission
FCI	Food Corporation of India
FEMA	Federal Emergency Management Agency (USA)
FICCI	Federation of Indian Chambers of Commerce and Industry
GAR	Global Assessment Report
GSDMA	Gujarat State Disaster Management Authority
GFDRR	Global Facility for Disaster Reduction and Recovery
GIDM	Gujarat Institute of Disaster Management
GIS	Geographical Information System
GOI	Government of India
GSDP	Gross State Domestic Product
GSI	Geological Survey of India
HAZUS	Hazard in the USA
HVS	Higher Vulnerability States
IDA	International Development Association (World Bank Group)
IDD	International Disaster Database
IIASA	International Institute for Applied Systems Analysis
IMD	Indian Meteorological Department

IT	Information Technology
LVS	Lower Vulnerability States
MHA	Ministry of Home Affairs
MOA	Ministry of Agriculture
NCRMP	National Cyclone Risk Mitigation Project
NDMA	National Disaster Management Authority
NDRF	National Disaster Response Funds
NHRA	Natural Hazards Risk Atlas
NIBS	National Institute of Building Sciences
NIDM	National Institute of Disaster Management
NSSO	National Sample Survey Organization
OM	Operations Manual
PC	Planning Commission
PDNA	Post Disaster Needs Assessment
PIU	Project Implementation Unit
POC	Project Oversight Committee
PONJA	Post-Nargis Joint Assessment
PSC	Project Steering Committee
RC	Relief Commissioner
RF	Relief Memorandum
SATI	State Administrative Training Institute
SDMA	State Disaster Management Authority
SDMC	SAARC Disaster Management Centre
SDRF	State Disaster Response Funds
SNA	System of National Accounts
SOP	Standard Operating Procedure
ToT	Trainers of Trainers
TSC	Technical Steering Committee
UN-ECLAC	United Nations Economic Commission for Latin America and the Caribbean
UNISDR	United Nations International Strategy for Disaster Reduction
UT	Union Territory

1: Preamble

The Post Disaster Needs Assessment (PDNA) methodology has been developed for India, on the basis of best current international practices and customized to local conditions, which will enable the comprehensive and scientific assessment of recovery and reconstruction needs on the basis of a thorough analysis of disaster effects and impacts.

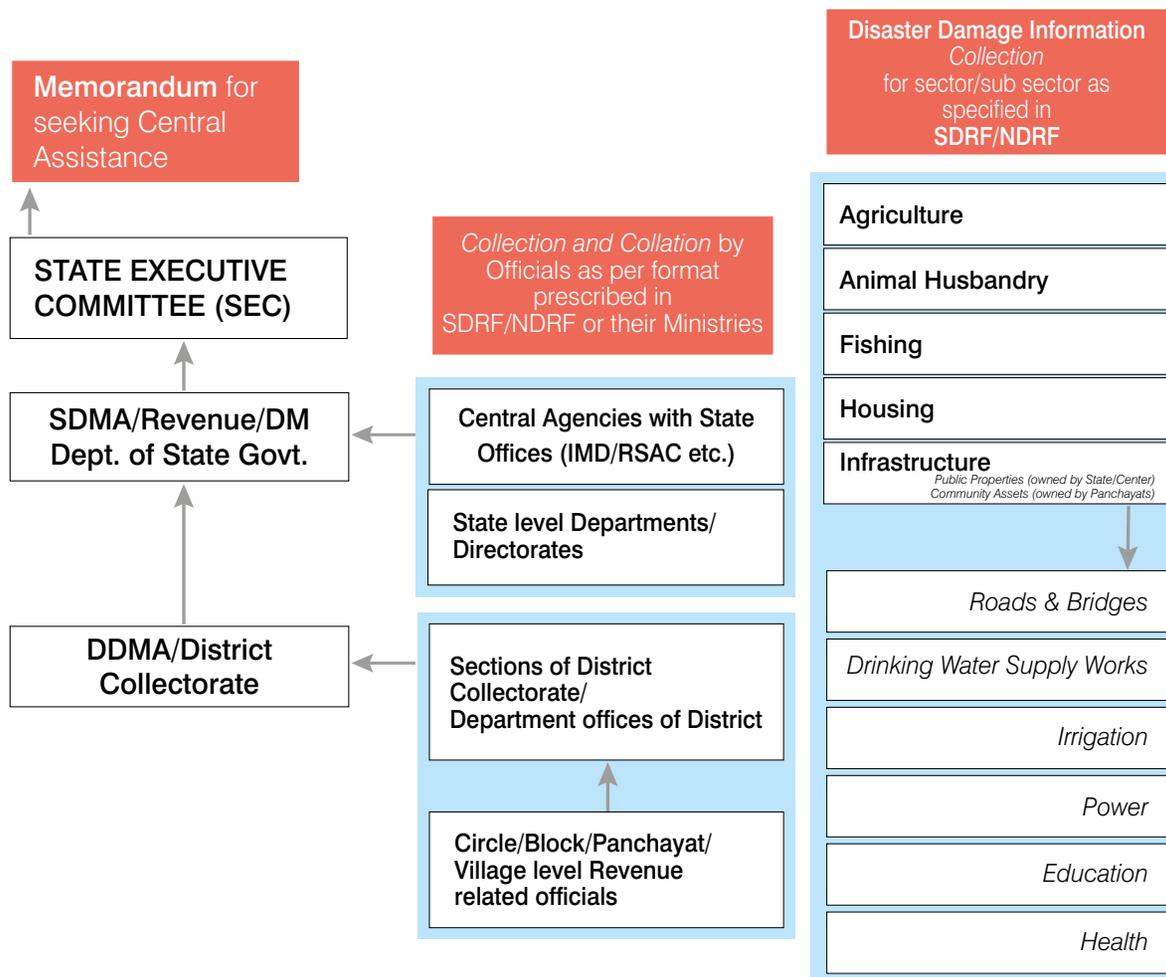
This methodology should not be seen as a replacement or substitute for the existing approach which the state governments use for the development of the Relief Memorandum. It should be noted that the methodology deals with a separate and additional area of disaster management i.e. recovery and reconstruction following a disaster while building resilience to future events.

It is important to note that the sectors typically included in comprehensive PDNA are decided by the Government and always driven by the severity of disaster impact on the sectors. While it is important that all the sectors be assessed for comprehensive recovery and reconstruction needs, only critical sectors such as infrastructure, housing, agriculture and cross cutting sectors are considered in rapid damage and needs assessment.

The current practice of conducting post disaster assessment in India follows the provisions and norms in the manual of National Disaster Response Fund/State Disaster Response Fund. The Disaster Management/Revenue Department of each State is mandated to collect information on damage and losses after any disaster and to provide the required disaster response thereafter. There are specified format used by the State government or, and the one prescribed in the SDRF/NDRF Manual¹. On the basis of damage reports developed by District, Block and Village Revenue Officers as well as of supplementary “detailed assessments” prepared by sectorial State Department Officials (including the Departments of Agriculture, Public Works, etcetera), a “Relief Memorandum” is prepared to be sent to the Central Government in order to obtain additional financial resources to meet post-disaster demands for assistance when required. The Relief Memorandum normally provides full information on the estimated value of required disaster response assistance based on the estimation of the extent and degree of damage and losses sustained by the affected population. Table 2 below shows the type of information collected by different Departments in the State of India as part of the rapid and detailed assessments.

¹Manual on Administration of State and National Disaster Response Funds, Ministry of Home Affairs, GoI, (revised-2013).

Existing Practice of Collecting, Collating and Reporting or Disaster Damage Data



In summary

- The PDNA is an **inter-agency coordination mechanism** in accordance with the existing DM Act 2005 and rules and provisions at the Central and State level.
- It facilitates a **comprehensive, coordinated and efficient approach** to damage, loss and needs assessment and recovery planning.
- The PDNA is a **process and not a product by itself**, which consists of different elements and outputs undertaken and delivered in the weeks, months and years following a disaster. It is not a 'one-shot' assessment and planning exercise.
- The PDNA is not a replacement for any other tools, processes and obligations that government organizations may have used to assess disaster damage. Indeed it should be complementary to existing tools, processes and mechanisms, some of which have been developed and tested over many years.
- PDNA outputs may be used for multiple purposes in relation to recovery efforts in a particular context, i.e. there are no explicit or implicit arrangements to inhibit participating agencies from using the PDNA reports for relevant but varying purposes.

2: Need for a Standard Operating Procedure (SOP)

The overall objective of this Standard Operating Procedure (SOP) is to put in place a standard mechanism for the States in undertaking a systematic and harmonized approach for conducting of post-disaster needs assessment as per the PDNA India tools developed by the Government of India. This SOP will, therefore, guide the State and its agencies in undertaking a post-disaster needs assessment (PDNA) and in developing a recovery and reconstruction plan of actions to build back better. National agencies, particularly the disaster management nodal ministries as well as development partners interested in assisting the State in the PDNA and in post-disaster recovery and reconstruction activities, shall also be guided by this SOP.

The adaptation of PDNA methodology for Indian context has been done for undertaking the damage, loss and needs assessment, which includes sector specific guidance notes detailing the steps of the assessment, templates for baseline data collection, templates for assessing damage and loss, summarizing impacts and developing priority needs for recovery and reconstruction (See the PDNA India).

Since disaster management is primarily a State responsibility and the National government and its relevant ministries/agencies assist the State in response, relief and reconstruction, any standard operating procedure would require a trigger for PDNA. The DM Act outlines the roles and responsibilities of the main stakeholders such as the nodal ministries for respective type of Disasters in India, the National/State/District Disaster Management Authorities (NDMA/SDMA/DDMA), research and technical agencies of the Government of India, as well as civil society organizations.

This SoP is intended to provide various States a clear set of guidelines that will lead to the undertaking a post disaster needs assessment after a disaster event, caused by a natural hazard in India. This SOP is not intended to replace any existing rapid assessment protocols for emergency relief and response after the disasters.

It is important to note that, at present, there is no threshold level that triggers the activation of protocols under the responsibilities of the Central and State levels in carrying out the damage, loss and needs assessment. As such, although the central and state governments conduct most of the post-disaster assessments jointly, the conditions that trigger the conduct of the PDNA - its timing, scope and duration among others – have not been clearly defined.

3: Operational Guidelines and Procedures

Trigger

The decision of the State to undertake a post-disaster damage loss and needs assessment (PDNA) shall be based on the situation analysis after all information have been gathered by the State responsible agencies from the following, among others:

- a. rapid impact needs assessment for emergency and relief report;
- b. from the database of disaster information system (IndisData²);
- c. various reports from the field, prepared by the state/district;
- d. from interviews with humanitarian responders; and
- e. available satellite imagery.

The above information will provide a first-hand assessment of the severity and scope of the disaster and its effect on various sectors and population, which will be the basis for final decision of the State to undertake the PDNA or not. If the situation analysis determines that the extent of the disaster effects is limited, a full-fledged PDNA may not be cost effective or sufficiently beneficial. If the situation analysis calls for the undertaking of a comprehensive PDNA, the State shall declare a state of calamity and, in consultation with the concerned Ministries (Ministry of Home, Ministry of Agriculture, etc.) take the lead in organizing and conducting a PDNA in accordance with the PDNA India Handbook and providing the guidance on key sectors and sub-sectors to be assessed.

However, there might be a situation where more than one state are affected or if the calamity is much beyond the capacity of the state concerned, the national government may decide to call it a national calamity. Hence, the role of national authorities becomes more prominent.

Scope

The SoP to conduct PDNA is operational mechanism. The procedure for sector assessment is provided in the PDNA India Handbook. The scope of this SoP is to provide an idea on who are the key agencies that would initiate PDNA.

²Currently the Ministry of Home Affairs, GoI is institutionalizing the disaster reporting and base line information collection using IndisData supported by UNISDR.

Roles and Responsibilities

- The State Revenue/DM Department will approve the implementation of this SoP and ensure its effective and efficient implementation and make recommendations to adjust/change the procedures which are suitable and applicable to local circumstances and actual practices.
- The PDNA management team shall be responsible in operationalizing the provisions of this SoP, ensuring the smooth conduct of the damage, loss and needs assessment and briefing on the progress and findings.

Organization and Funding

The PDNA will be a State Government-led activity and the funds required in undertaking it, should be mainly sourced from the State with contributions from the national Ministries, if required. The State Revenue/ Disaster Management Department will be responsible for the overall organizing and leading the conduct of the PDNA.

The assessment teams for the various sectors should be drawn from experts from the concerned state departments and national ministries to be appointed by the appropriate official concerned. Since international development agencies/partners value the results of the PDNA, they should be encouraged to participate and contribute to the needs of the PDNA activities.

Ideally, in cases of disasters with wide scope and coverage, multiple assessment teams can be organized to simultaneously conduct a PDNA in the affected districts. The following departments, ministries and/or agencies shall be responsible for the PDNA of their respective sector and sub-sectors:

1. Revenue and Disaster Management – for overall coordination.
2. Planning and Investment – Macroeconomy and overall drafting of the recovery and reconstruction plan.
3. Public Works and Transportation – Roads, bridges, ports, airports, and other assets in the sector.
4. Agriculture and Forestry – Crops, livestock, fisheries and forestry.
5. Public Health – Public and private health facilities and rural water supply system.
6. Education and Sports (MES) – Public and private educational facilities at all levels and all sports facilities.
7. Housing and Urban Planning – Housing and urban water supply.
8. Energy – Electrical or power sector.
9. Mining – Mining sector.
10. Industry and Commerce -Trade and services including the informal sector.
11. Telecommunications – Post and telecommunications facilities.
12. Tourism – Tourism and other related services
13. Culture – Cultural and religious sites.

The assessment teams of the various State departments or agencies shall be joined by their counterparts in the national ministries and district governments, in undertaking the PDNA. Representatives from foreign and international development partners may join the PDNA upon the approval of the Government. A pre-arranged inter-departmental agreement for such expertise should be made.

4: Operational Activities and Protocols for PDNA

4. a: Planning for PDNA (Week 1 after the disaster event)

1. The Revenue/Disaster management department, based on the initial assessment and in consultation with national agencies will recommend for PDNA exercise.
2. Upon approval by the Chief Minister that a PDNA is necessary, the State shall inform the national nodal ministries and invite the other government ministries and technical agencies such as CWC, IMD, ISRO etc. to participate in the PDNA activities. The State Disaster Management /Revenue Departments shall lead the PDNA in cooperation and coordination.
3. The PDNA should be a well-coordinated inter-agency mechanism. Agreement on the management structure of the PDNA is important. The management structure shall comprise of the following:
 - **PDNA management team:** depending on the decision made by the State, the assessment team is normally led by the Secretary in charge of disaster management. The management team shall meet regularly to oversee the process of assessment, provide strategic guidance, take decisions and shall ensure that the necessary resources are available for undertaking the assessment.
 - **Coordination team:** the PDNA management team will agree on assigning a few staff to provide coordination to state government and logistics. The members can be from national ministries or state department. The team shall be responsible for managing day-to-day planning, coordinating with the sector team members as well as state government and donors in conducting the assessment, analyzing the data, preparing the reports, and the development of the recovery and reconstruction framework under the guidance of the PDNA management team. The Coordination team shall have the principal responsibility in organizing the conduct of the assessment and in ensuring that all logistical arrangements are in place.
 - **Sector teams:** the sector teams shall comprise of designated technical representatives from line ministries at national level and their respective state departments and district offices, as well as with representatives from development partner agencies (as per the criteria provided in the India PDNA Tools). The team members³ from the national level will assist the state level during the field visit to the affected area. The sector team will be responsible for collecting sector specific baseline data, damage and loss data, undertaking field visits to validate the data collected, analyzing the data and writing the sectorial assessment report on damage and loss and proposed sector priorities for recovery and reconstruction. Detailed composition and ToR of each sector team shall be based on the suggestion provided in the sector Guidance Notes for undertaking PDNA (See PDNA Manual).

³Such a Team should be selected from the PDNA India roster database created and maintained by the State DM Department and Ministry of Home Affairs.

- **Report Preparation Secretariat:** the coordination team, with technical support from development partners (if required), shall be responsible for coordinating with the sectorial team members for the sector report based on data analysis for their sector. The coordination team will then compile and summarize the individual sectorial report into consolidated report.
4. The Secretary, State Disaster Management, as the leader of the PDMA management team will brief the State Executive Committee on the conduct of the PDNA and recommend appropriate actions to be taken, including timeframe for completing the assessment and delivering the report. The Secretary will also decide if assistance from development partners, in the conduct of the PDNA, is needed. If required, the nodal ministry at national level will coordinate with the Ministry of External Affairs (MoEA), to issue a formal letter requesting for assistance from development partners in the conduct of PDNA.
 5. **Stakeholder consultation:** Once the formal request is made by the MEA to development partners (normally the United Nations Office of the Resident Coordinator (UNORC) on behalf of all the UN agencies, ADB and World Bank), the MHA will call for an internal meeting between the UN agencies and development partners. The representatives of PDNA management team will join the consultation meeting and outline the objective and engagement development partners in the coordination team and respective sector team and seek support on sharing of resources; human (technical supports), logistics and financial. Being a government-led process, the major cost of the assessment shall be borne by the Revenue/DM Department, sector department/ministries with necessary support from development partners as per need. The government may consult and discuss with the UN agencies and the development partners on the scope of the assessment (such as proposed sectors and sub-sectors to be assessed, team composition from the government, timeframe, provinces to be visited) and other logistics in preparation for the assessment.
 6. **Orientation training:** Prior to starting the assessment, it is important to refresh the designated PDNA team members on the broad concept of the damage, loss and needs as well as methodology for undertaking the assessments for each sector/sub-sector and issues to be aware when the team is in the field for individual sector members. One common briefing from the Coordination team should be provided to the sector teams on assessment objectives, deliverables, duration, communication channels, and reporting. The National Institute of Disaster Management (NIDM), with State level training institutions, should provide the orientation training based on the PDNA Professional and ToT modules. A contextualization from the professional development and training of trainers is important.
 7. **Baseline data collection:** Sector teams should initiate collection of baseline data as per the templates prescribed in the sector specific Guidance Notes (See PDNA Handbook) on undertaking damage, loss and needs assessment. Where available, the sector teams are encouraged to use the existing data available for the sector, affected states and districts as a baseline prior to happening disaster. The Central Statistical Organization (CSO) as well as State specific Departments should maintain and update key baseline data of sectors.

4. b: Formulation of Recovery and Reconstruction Strategy (Week 1 after the disaster event)

In parallel to the PDNA planning process, the formulation of recovery and reconstruction strategy shall be initiated (for more details see PDNA Handbook and Manual). The objectives for developing a post-disaster recovery framework are;

- Provide indicative steps to facilitate a sequenced, prioritised and flexible multi-sectoral planning guide for recovery programmes.
- Provide guidance to states for organising post-disaster recovery in accordance with the damages, losses and needs following a disaster event.
- Plan and implement a post-disaster recovery programme in an inclusive and transparent manner (including financial planning and institutional arrangements).
- Recommend policies, strategies, areas of technical assistance and monitoring support needed for recovery programming.
- Optimise the use of national flagship programmes, other schemes and resources for implementing recovery.
- Provide guidance to reduce future disaster risks and allow for further opportunities for long-term sustainable development.

The key considerations for developing a sustainable recovery framework are:

- Need for adopting different approaches for rural and urban areas as well as for different kind and scale of disasters.
- PDNA as a basis for recovery programmes
- PDNA must be government-led and government-owned process
- Strengthening existing institutional framework for implementing recovery programmes
- Implementation through Convergence with National Development Programmes
- Setting up a pool of technical resources for implementing programmes
- Resource planning for recovery
- State governments must take responsibility for recovery programmes

The guiding principles for recovery framework are;

- Integrating Disaster Risk Reduction & Climate Change Adaptation
- Multi-sector approach based on needs and priorities
- Joint Effort of Government, NGOs, Private Sector, Communities
- Building capacity and social capital through effective coordination, communication and partnerships
- Community-centred approach
- Gender equity and empowerment of women
- Inclusion of weaker sections of society and people with disabilities and displaced populations
- Transparency and accountability through oversight, monitoring and redress of grievances.

4. c: Undertaking PDNA (Week 2nd to 5th after the disaster event)

The following steps broadly describe the key processes involved in undertaking the damage, loss and needs assessment:

1. **Damage and loss data collection:** Sector team shall collect the data on damage and losses as per the prescribed templates
2. **Field Visit:** The PDNA Management team should introduce the team, and methodology for the assessments to state Govt. as well as request for their support, in taking the team to see the most affected areas and ensure coordination of the district staff, in getting some necessary data. Sector team will undertake visit to the affected areas to validate the data collected on damage and losses. Depending on sectors affected, the field visit will also include focused group discussions with representatives of population affected such as farmers, owners of business enterprises, socially vulnerable population such as women, elderly etc., to understand the scale of impacts, their immediate responses and the priority needs at the local level. In the field, the various assessment teams shall:
 - a. Conduct visits to affected structures to assess and estimate damages.
 - b. Discuss with their local government counterparts to estimate damages and losses.
 - c. Consult with affected farmers, business leaders and other sector associations to validate the damages and potential losses.
 - d. Conduct focus group discussions and participatory observations with the affected people.
 - e. Prepare a draft damage and loss table for each of the provinces assessed.

After the full field visits are completed, a debriefing of the district officials on the damages and losses in the areas assessed should be under taken as much as possible.

3. **Sector analysis (4-5th Week)** Based on baseline data and damage information collected from the field, visit of the affected areas, the sector team shall calculate the damage and losses suffered by the sector and initiate writing of the report on sectorial impacts of the disaster event. It is important to include the data generated in any prior assessment conducted for this disaster. Before any consolidation of the PDNA findings can be done, a review meeting should be organized to:
 - a. Validate and cross check the information gathered from the field to avoid double counting;
 - b. Exchange information especially those data and findings that necessary for the macroeconomic impact assessment, environmental assessment, and the social impact assessment including the cross-cutting concerns; and
 - c. Identify strategies for recovery and reconstruction
4. **Estimate sector needs: (4-5th Week)** Based on submission of individual sector reports, the coordinating team shall compile and make an estimate of the aggregate damage and loss for each sector as well as the overall macro-economic impacts of the disaster. The estimated needs will help in rehabilitating the damaged infrastructure and restore livelihood in the affected areas. Improved resilience to disaster in the longer term or “build back better (BBB)” will also be included in the report. The points to remember are as follows;

- *The recovery and reconstruction strategy of all the sectors shall be based on the national strategy for recovery and reconstruction agreed upon during the previous joint consultation.*
- *Estimation of recovery and reconstruction needs of the sector shall be undertaken based on the results of the damage and loss assessment and the finalized sector strategy, and will include identification of priority interventions.*
- *Report on sector impacts and needs for recovery and reconstruction shall be completed by the Sector Teams and submitted to the Coordination team.*

5. Finalize damage, loss and needs assessment report (Week 4 after disaster)

- Based on submission of individual sector reports, the coordinating team shall compile and make an estimate of the aggregate damage and loss for each sector as well as the overall macro-economic impacts of the disaster with inputs from the Planning Department in each States and the NITI Ayog⁴.
- The estimated needs will help in rehabilitating the damaged infrastructure and restore livelihood in the affected areas. Improved resilience to disasters in the longer term or “build back better (BBB)” will also be included in the report.

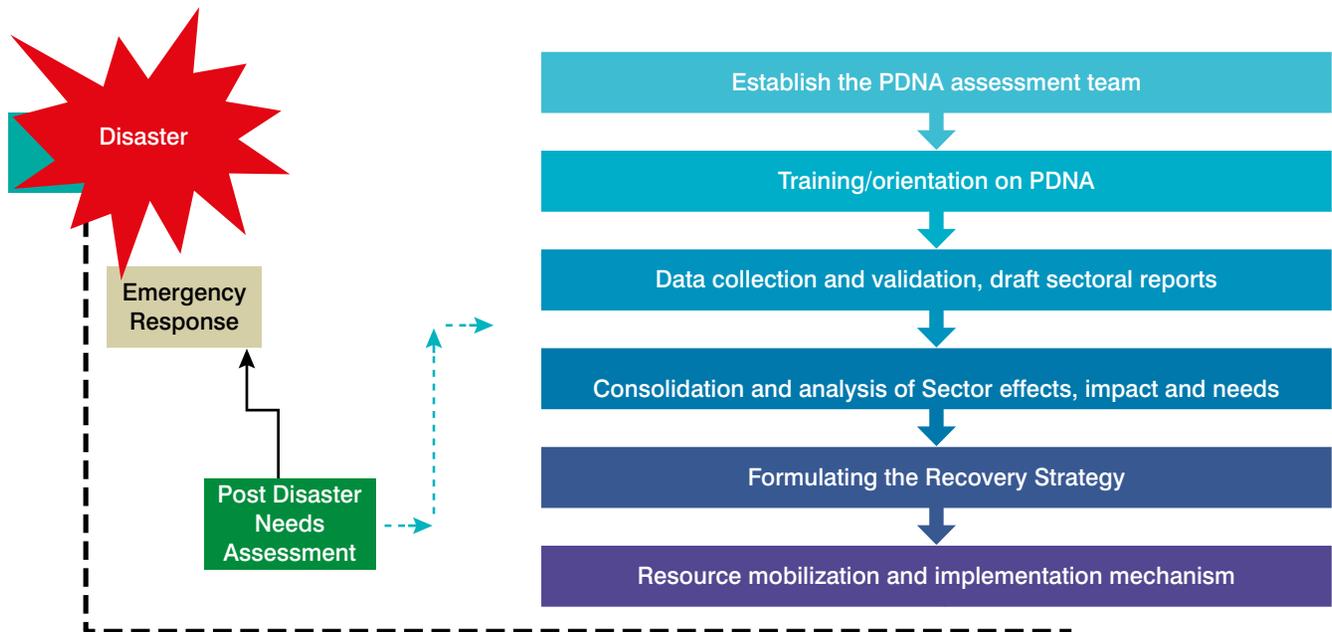
6. Approval and dissemination of final report (Week 5 after disaster)

- The consolidated report will be consulted with the sector team members and the representatives of high-level management team, to agree on the content and format
- The high-level management team will present the results of the assessment to the appropriate authority for approval.
- Once approved, concerned nodal Department/Ministries, Ministry of Finance (MoF) and Ministry of External Affairs (MoEA) will hold a national consultation to disseminate the assessment result with the donors/development partners for further assistance in the rehabilitation of the damage and loss caused by disaster in the short, medium and longer terms.

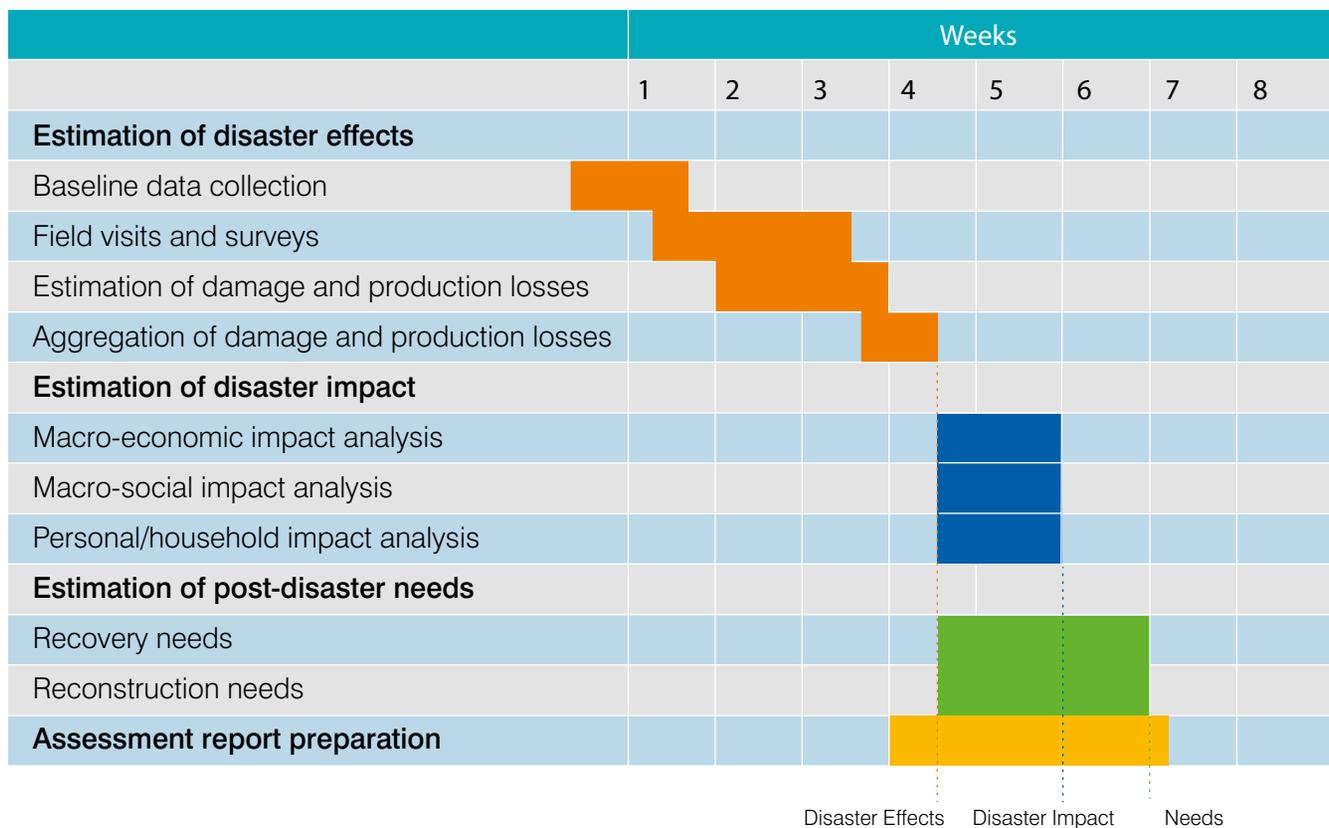
⁴National Institution for Transforming India Aayog is a policy think-tank of Government of India that replaces Planning Commission and aims to involve the states in economic policy-making in India.

5: Key Time Lines

The recent advancement in disaster assessment, particularly the adoption of the National Disaster Management Plan, 2016, by the Government of India in line with the Sendai Framework for DRR (2015-2030), puts greater emphasis on resilient recovery. For resilient recovery, the key factor is the assessment of post disaster damage and needs. The PDNA steps are explained in the PDNA Manual in more details but the key steps are presented below



For each of the steps, the key factor is the time line. The agreed international methodology based on UN-ECLAC by UN, EU and WB proposed the following time line for a comprehensive assessment.



It is very likely that the State Government decides the timeline in different ways, depending on the severity of the disaster as well as resources and instruments available for conducting PDNA.

6: Key Considerations

Flexibility

- A. Recognizing that various disasters may cause different effects in different areas and/or sectors, the assessment teams in the field should determine the appropriate timing and duration required to finish the PDNA.
- B. The Revenue/State DM Department responsible for the conduct of the PDNA may request the representatives from other government offices, development partners and concerned private groups, as deemed appropriate.
- C. Ideally, in cases of disasters with wide scope and coverage, multiple assessment teams can be organized to simultaneously conduct a PDNA in the affected areas.

People's Participation

Disaster victims in all sectors, or their representatives, should be consulted as much as possible. This will validate the perceptions or findings of the assessment teams. Special focus should be given to the impacts on women, children, the elderly and other vulnerable groups.

ABOUT THE INSTITUTE

National Institute of Disaster Management (NIDM) constituted on 30.10.2006 under The Disaster Management Act 2005 has been entrusted with the responsibility for planning and promoting training and research in the area of disaster management, documentation and development of national level information base relating to disaster management policies, prevention mechanism and mitigation measures. Re-designated from the National Centre for Disaster Management of the Indian Institute of Public Administration on 16th October 2003, NIDM is steadily marching towards the mission of making a disaster resilient India by developing and promoting a culture of prevention and preparedness at all levels.

FUNCTIONS

Under The Disaster Management Act 2005, the Institute, has been entrusted with the following functions:

- Develop training modules, undertake research and documentation in disaster management and organize training programmes
- Formulate and implement a comprehensive human resource development plan covering all aspects of disaster management
- Provide assistance in national level policy formulation
- Provide required assistance to the training and research institutes for development of training and research programmes for various stakeholders
- Provide assistance to the State Government and State training institutes in the formulation of State level policies, strategies, disaster management framework and any other assistance as may be required for capacity building
- Develop educational materials for disaster management including academic and professional courses
- Promote awareness among stakeholders including college or school teachers and student, technical personnel and others associated with multi-hazard mitigation, preparedness and response measures
- Undertake, organize and facilitate study courses, conferences, lectures, seminars within and outside the country to promote the aforesaid objectives
- Undertake and provide support for publication of journals, research papers and books as well as establish and maintain libraries etc.



Resilient India - Disaster free India

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