

Post Disaster Needs Assessment (PDNA) in Culture Sector

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Webinar on: Earthquake Risk Reduction for Cultural Heritage Sites

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Main challenges in planning for recovery after disasters

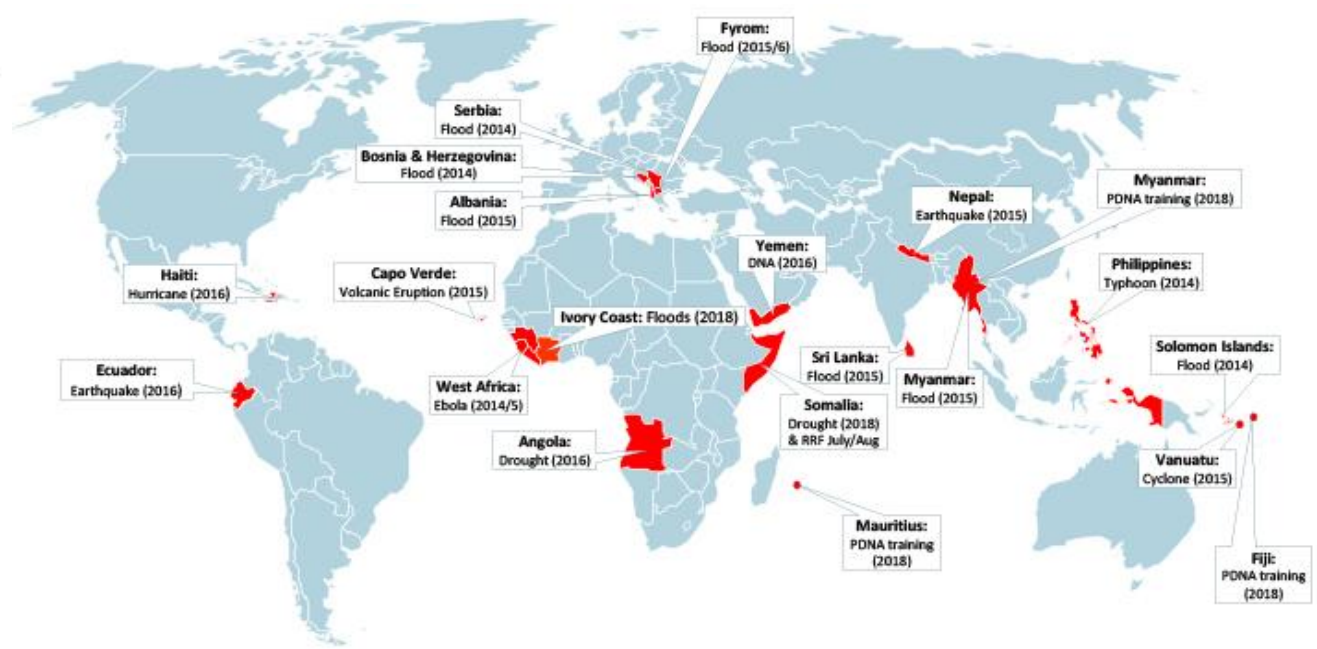
- Lack of systematic measures for data collection
- Difficulties in verification of data received from the disaster affected areas by local authorities
- Unclear picture about situation and needs of the affected sites
- Challenges in budget allocation for recovery and reconstruction
- Insufficient attention to the long-term impacts of disasters

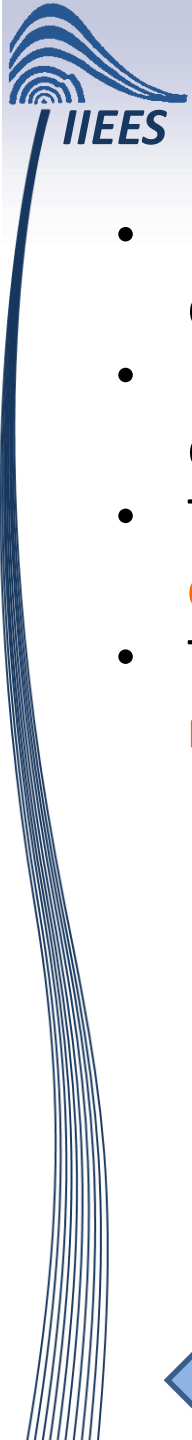




On 25 September 2008, the UN, EU and WB signed a **Joint Declaration** on Post-Crisis Assessments and Recovery Planning

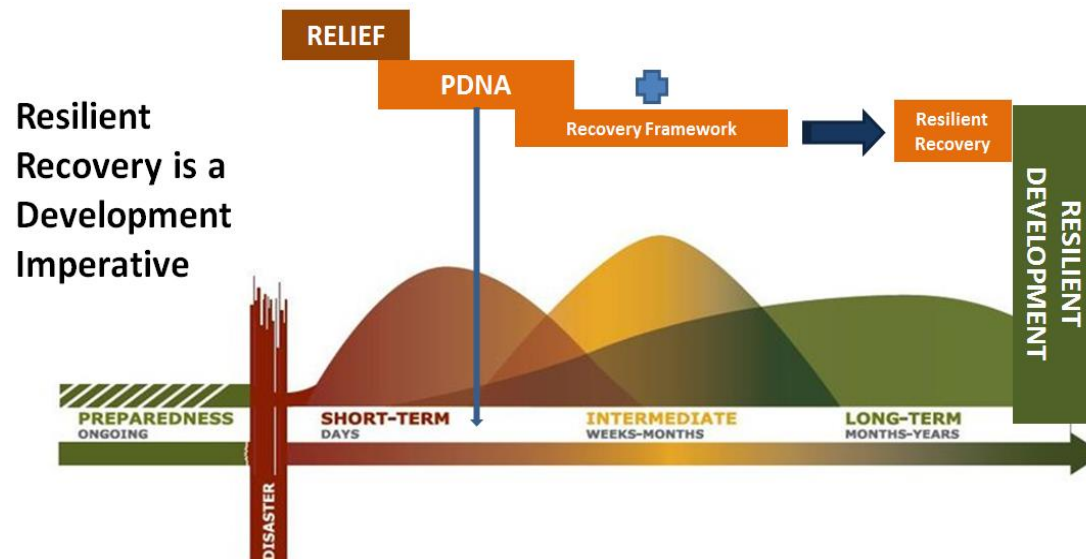
Presented in September 2014 at the Second World Reconstruction Conference; officially launched at the Sendai World Conference on Disaster Risk Reduction on 14 March 2015



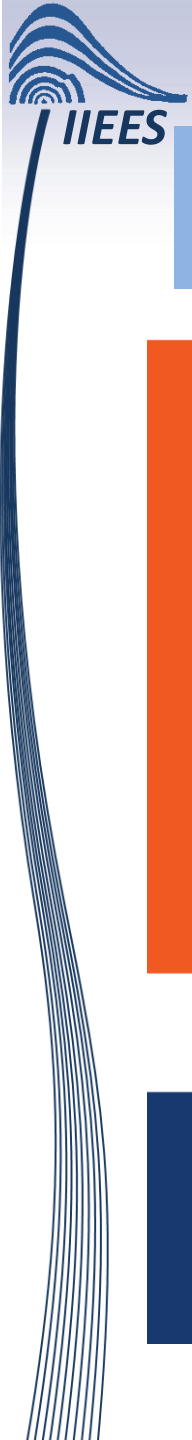


PDNA Objectives

- PDNA is a **Government-led Assessment for recovery planning** after a disaster (Conducted 1-3 months after disaster strikes)
- PDNA analyses the **damage, economic loss, effects and impact** of the disaster and identifies **recovery needs** across identified sectors
- The assessment also highlights the **macro-economic and human development** impact of the disaster
- The assessment helps to **mobilize resources**, develop a comprehensive **recovery strategy** & provides foundation for aid requests.



Inclusive and Accountable: Gender, Disability, Risk Reduction, Climate Change, Conflict....



Typical Sectors and Subsectors

PRODUCTIVE

-  Agriculture
-  Commerce
-  Industry
-  Tourism

SOCIAL

-  Housing
-  Education
-  Health
-  Culture

INFRASTRUCTURE

-  Water & Sanitation
-  Community infrastructure
-  Energy
-  Transport
-  Telecommunications

CROSS-CUTTING

GENDER

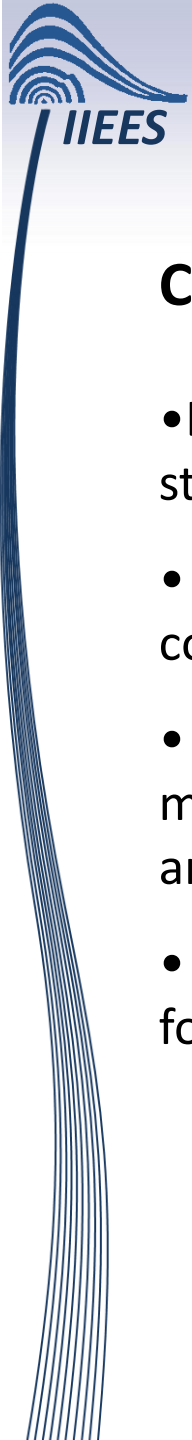
GOVERNANCE

ENVIRONMENT

DISASTER RISK
REDUCTION

EMPLOYMENT AND
LIVELIHOODS

Note: The diagram above illustrates the typical sectors that are assessed in the PDNA, this can vary from country to country.



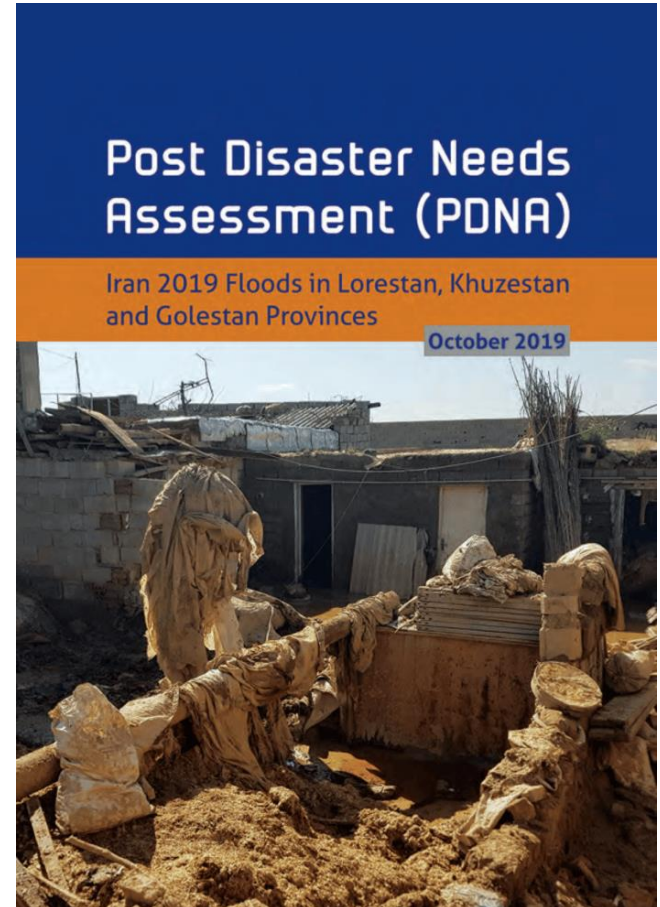
The First PDNA in Iran was conducted in 2019 nationwide floods



Challenges:

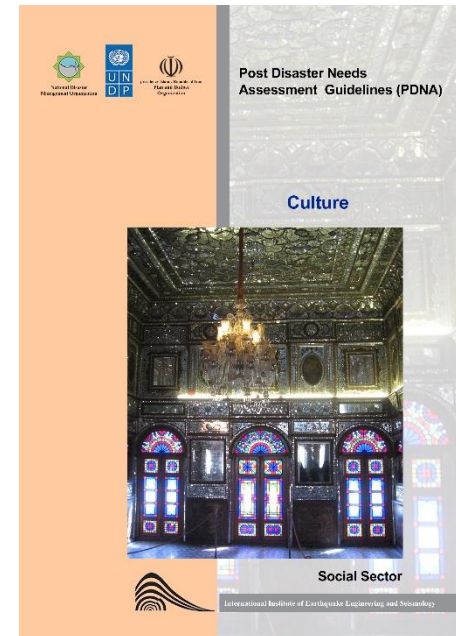
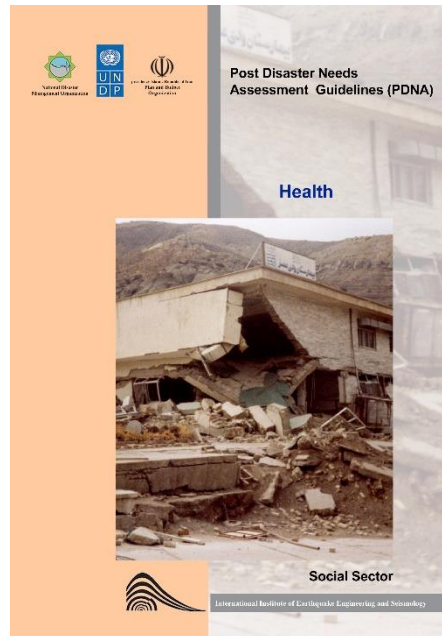
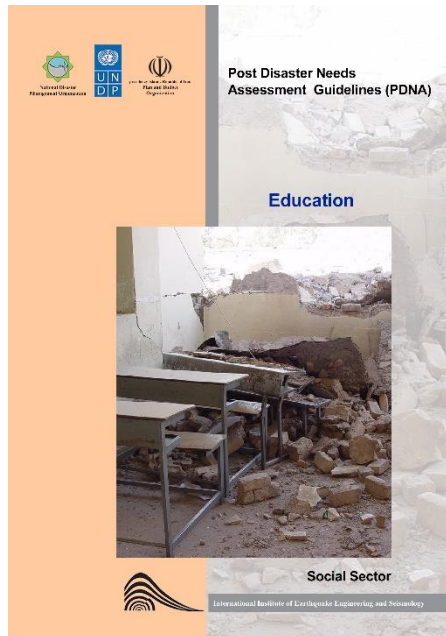
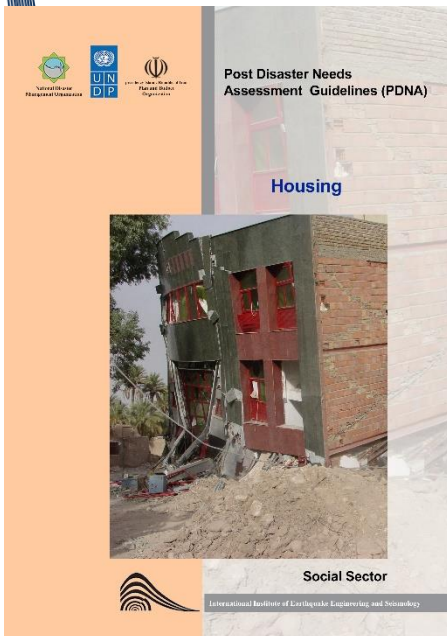
- Lack of appropriate PDNA guidelines and standards
- Lack of appropriate methodology for data collection, integration and assessment
- Necessity for formulating national measures to quantify damage, loss, impacts and needs
- Necessity for developing appropriate tools for collecting and processing data

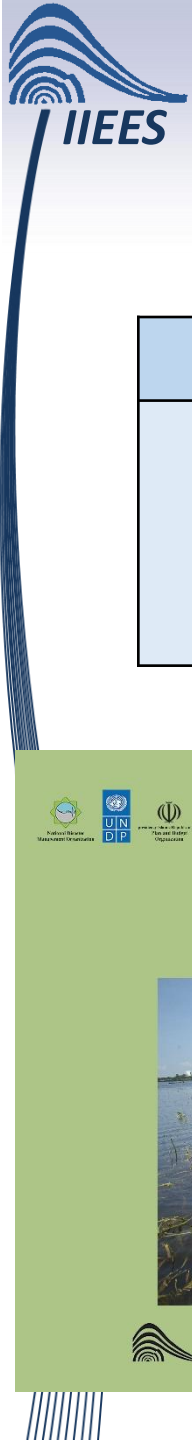
To address these issues IIEES developed national PDNA guidelines in 19 sectors



PDNA National Guidelines (Social Sectors)

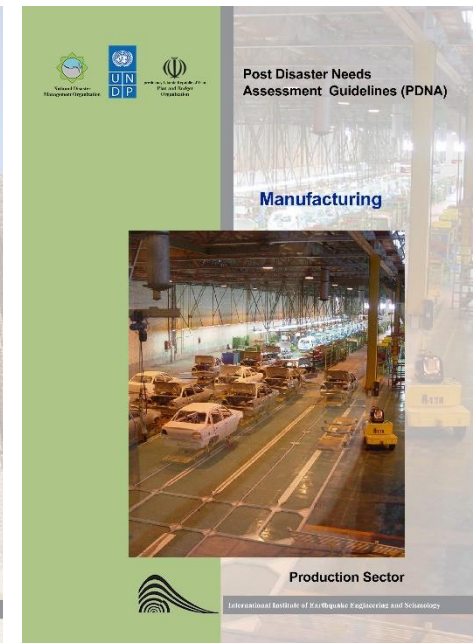
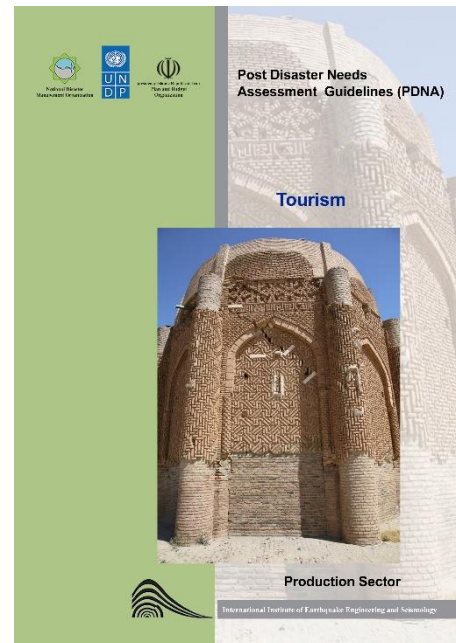
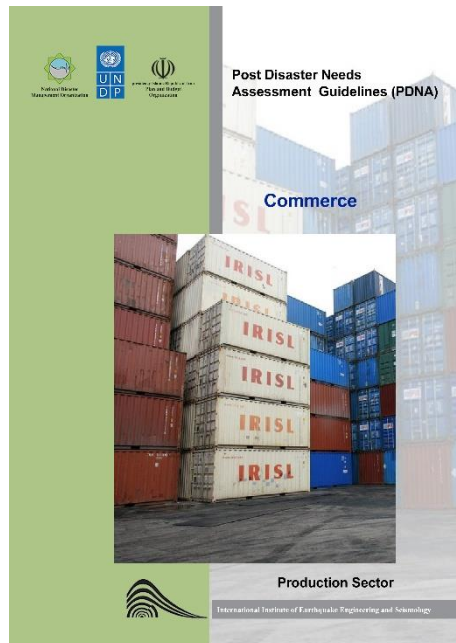
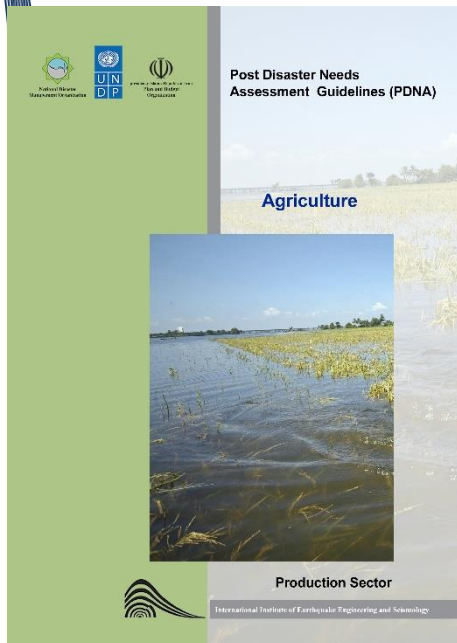
Sector Group	Sectors
Social	<ul style="list-style-type: none"> • Housing • Education • Health • Culture

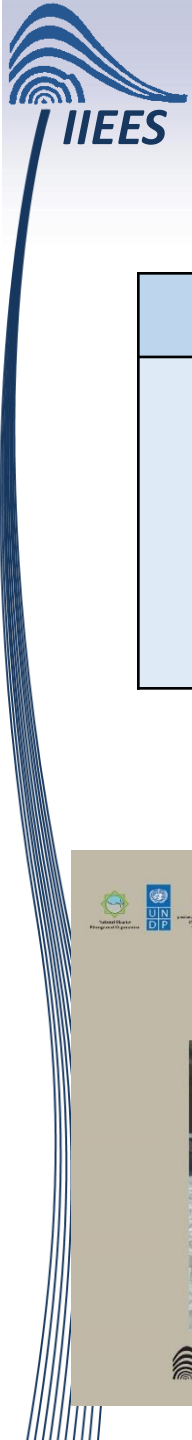




PDNA National Guidelines (Productive Sectors)

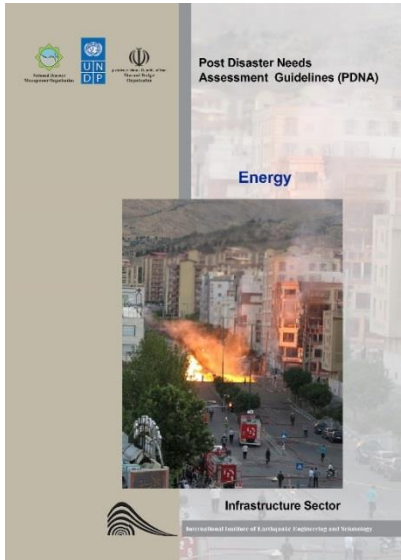
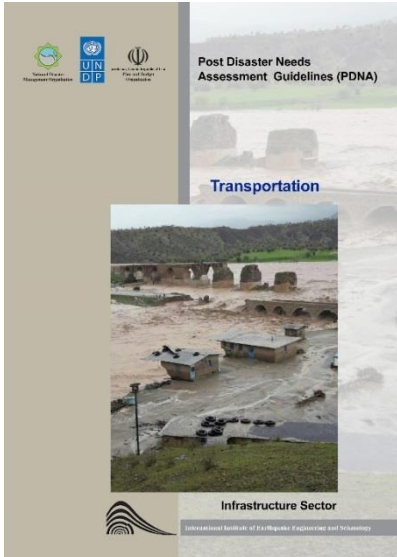
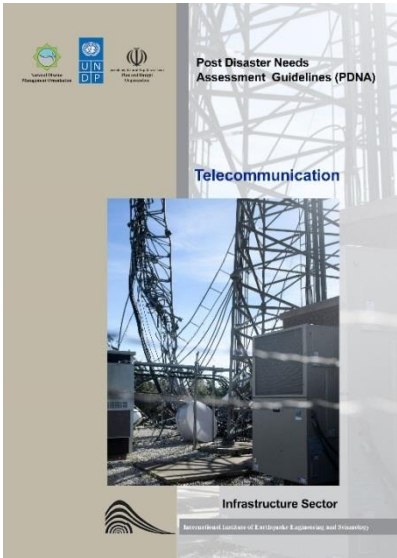
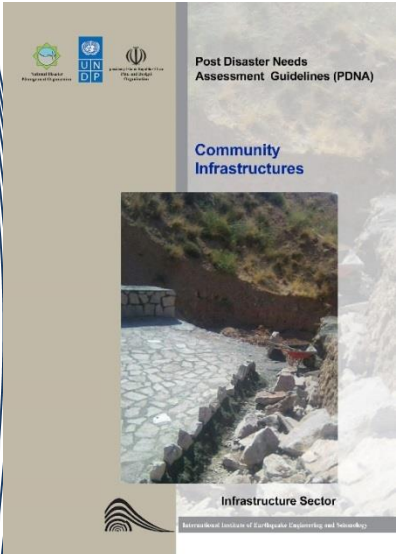
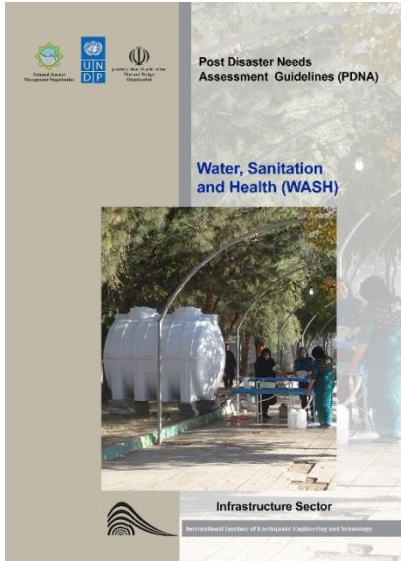
Sector Group	Sectors
Productive	<ul style="list-style-type: none">• Agriculture• Commerce• Tourism• Manufacturing





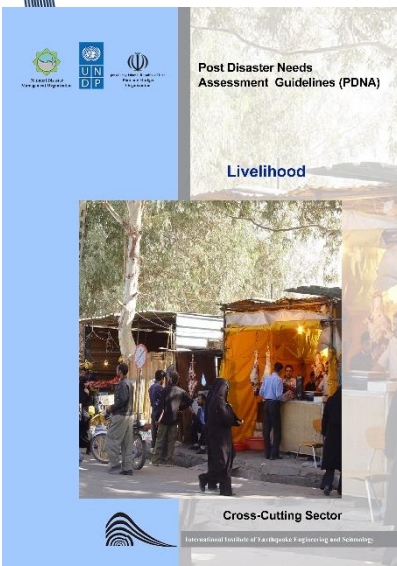
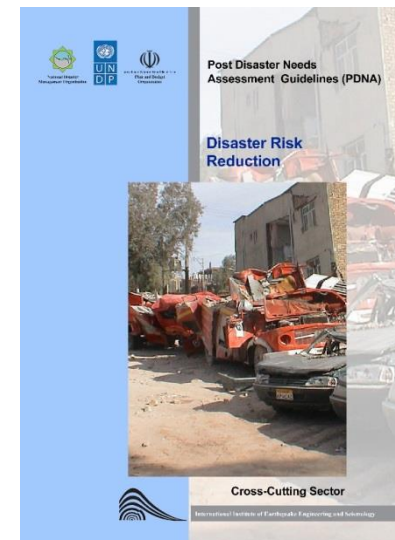
PDNA National Guidelines (Infrastructure Sectors)

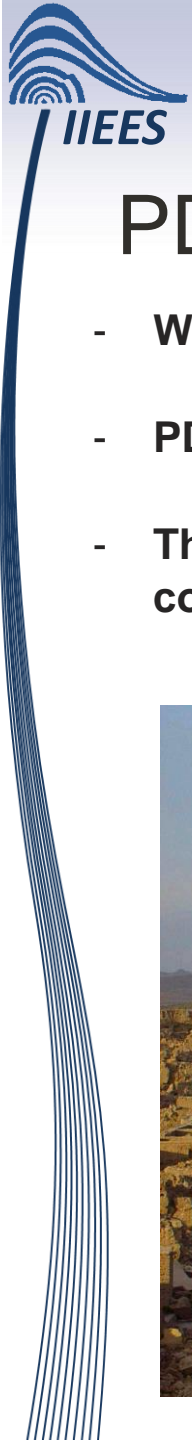
Sector Group	Sectors
Infrastructure	<ul style="list-style-type: none">• WASH• Community Infrastructure• Telecommunications• Transportation• Energy



PDNA National Guidelines (Cross Cutting Sectors)

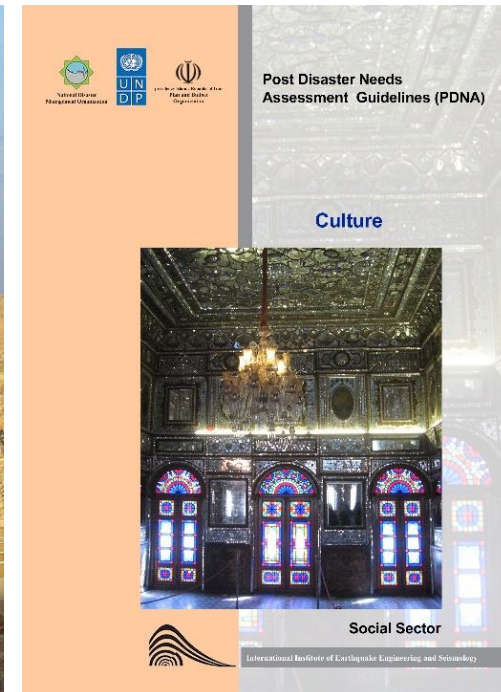
Sector Group	Sectors
Cross- Cutting	<ul style="list-style-type: none"> • DRR • Livelihoods • Environment • Gender • Governance • Macro-economic





PDNA in Culture Sector

- When disaster strikes, cultural elements faces unique risks.
- PDNA should address both tangible and intangible cultural assets.
- This methodology is critical for securing recovery funding and preserving community identity in the aftermath of a disaster.

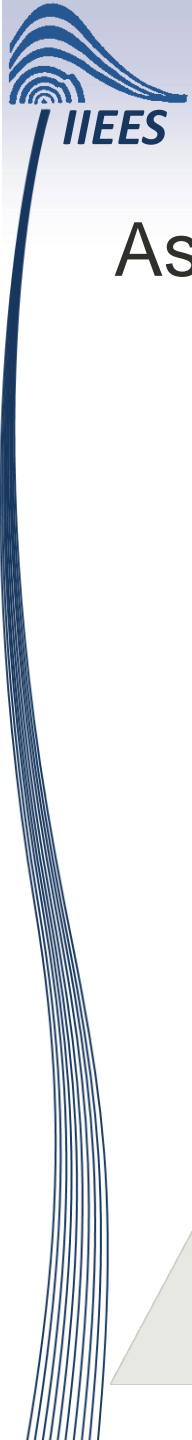




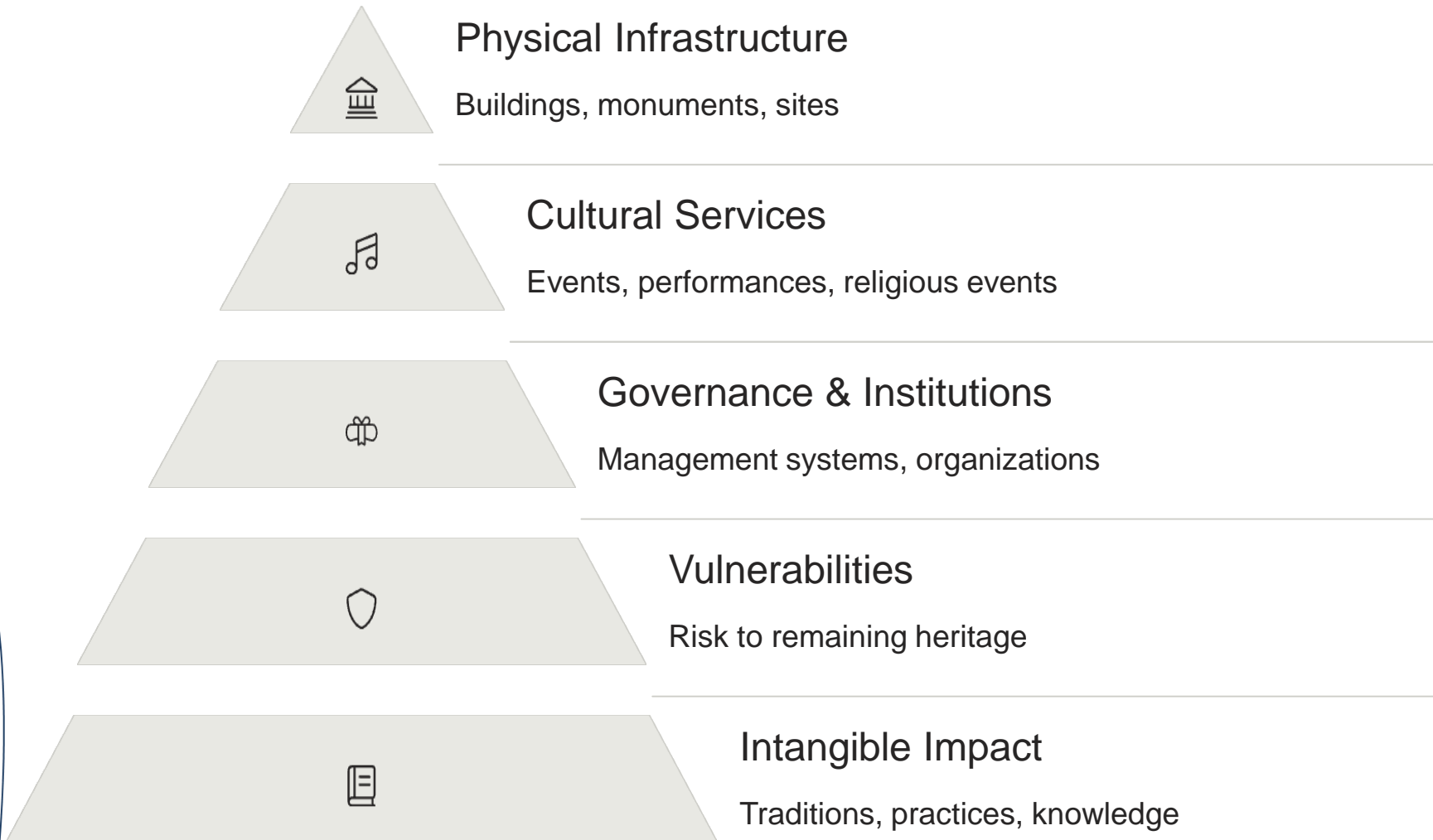
Why Culture Requires Special Assessment

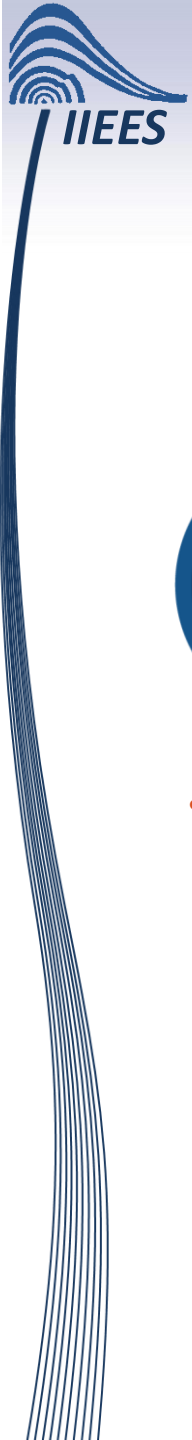
- Complex Evaluation**
Cultural assets demands **detailed site-by-site assessment** beyond initial rapid evaluations.
- Dual Value**
Sites represent both **economic assets and irreplaceable heritage significance.**
- Specialized Expertise**
Accurate assessment requires **knowledge of conservation and cultural practices.**



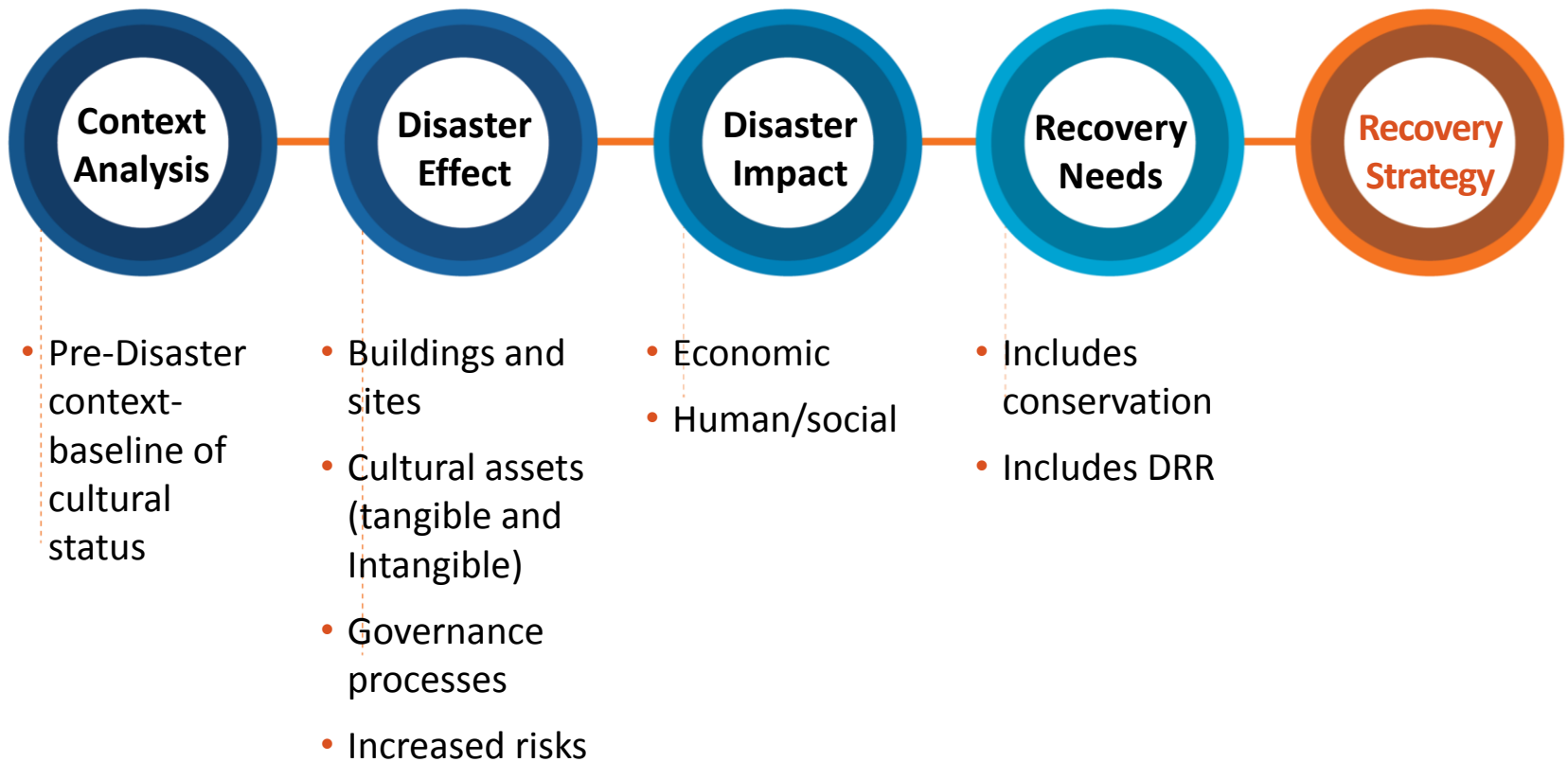


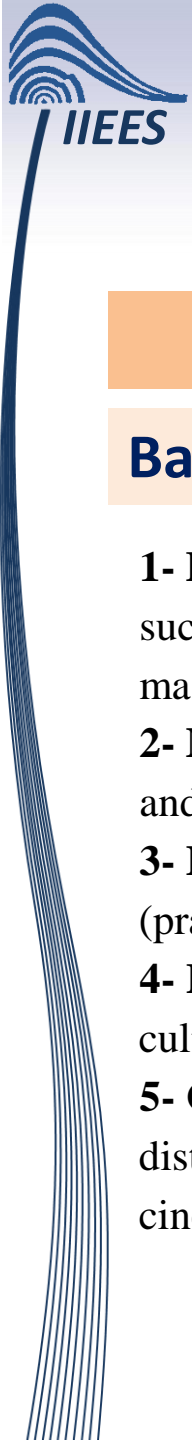
Assessment Components for Cultural Assets





The PDNA Process Culture Sector

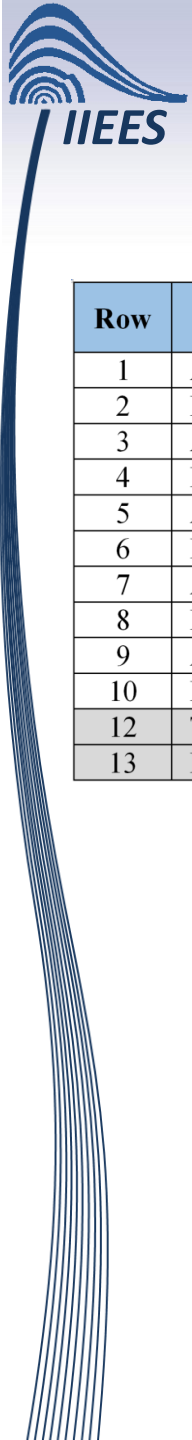




Main elements of PDNA in the Culture Sector

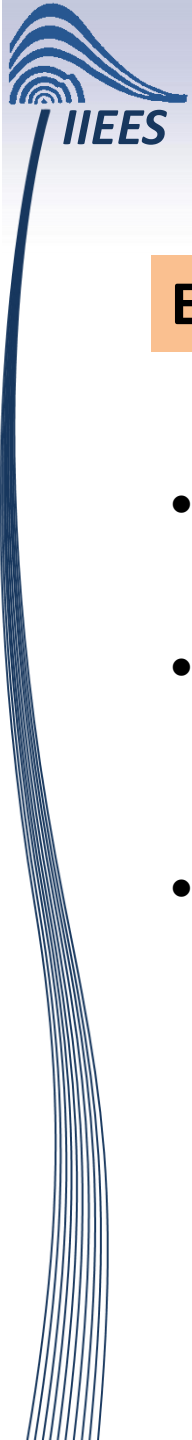
Baseline Information

- 1- Built heritage and cultural/natural sites:** Buildings and structures of high cultural importance such as historical settlements, single buildings (religious, ancient, historical and modern masterpieces) and contemporary infrastructure (bridges, ports), geo-parks, biodiversity etc.;
- 2- Moveable properties and collections:** Works of art, antiquities and anthropology, archived works and manuscripts, and like these;
- 3- Intangible cultural heritage:** List of systems and procedures related to traditional knowledge (practices, symbols, terms, knowledge, and skills);
- 4- Repositories of heritage** (Museums, libraries and archives, cultural institutions, educational-cultural buildings, botanical and zoological gardens with related facilities;
- 5- Cultural and creative industry:** Infrastructure, resources and processes for the production, distribution and sale of creative cultural goods such as music, handicrafts, audio and video products, cinema, books, etc.



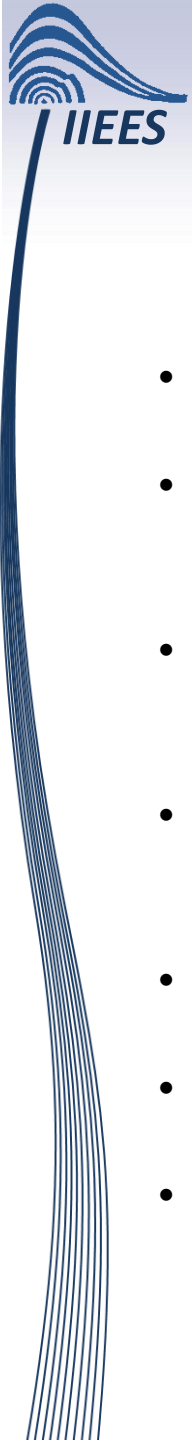
Row	Subject	County 1	County 2	County 3
1	Annual income of heritage and cultural / natural sites built ¹ (IRR M)			
2	Revenue share of heritage and cultural / natural sites made from the province's GDP (%)			
3	Annual income of assets and movable collection ² (IRR M)			
4	Revenue share of assets and movable collections from the province's GDP (%)			
5	Annual income of intangible cultural heritage (IRR M) ³			
6	Revenue share of intangible cultural heritage from the province's GDP (%)			
7	Annual income of heritage sites and valuable works ⁴ (IRR M)			
8	Revenue share of heritage sites and valuable artifacts from the province's GDP (%)			
9	Annual income of cultural and creative industries (IRR M) ⁵			
10	Revenue share of cultural and creative industries from the province's GDP (%)			
12	Total annual income in the field of culture (total of rows 1, 3, 5, 7 and 9), (IRR M)			
13	Revenue share culture sector in the county's GDP (total of rows 2, 4, 6, 8, and 10), (%)			

Row	Components	Subsection	Value (IRR B)	Insurance coverage (IRR B)	labor		
					Total	Female	Male
1	Movable artwork	Buildings, infrastructure and equipment					
2		Works					
3		Total sum of rows 1 & 2					
4	Antiques and historical / ancient property	Buildings, infrastructure and equipment					
5		Works					
6		Total sum of rows 4 & 5					
7	Natural works	Buildings, infrastructure and equipment					
8		Works					
9		Total sum of rows 7 & 8					
10	Old collections, documents and Manuscript	Buildings, infrastructure and equipment					
11		Works					
12		Total sum of rows 10 & 11					
13	Total (sum of rows 3, 6, 9 and 12)						



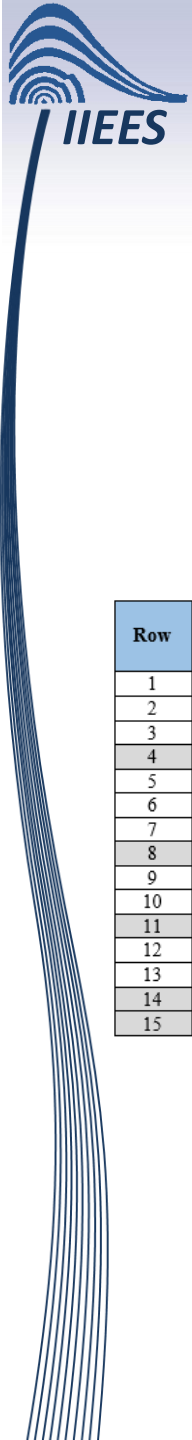
Effects and impacts of disasters

- **Damage:** The amount of physical damage to assets at each area (estimation of the value of tangible assets);
- **Loss:** Changes in the flow of goods and services, reduced revenues, increased costs compared to current values, etc. The economic effects of the losses may continue for all or part of the reconstruction and rehabilitation period;
- **Impacts:** The long-term social and economic consequences of disasters in the field of culture that usually change macroeconomic indicators and human development.



Assessing the general status of the affected area

- Specifications of disaster affected and the existing cultural diversity
- Distribution of affected employees in different fields of the culture sector (such as artists, craftsmen, writers, poets, media people, librarians, museum owners, etc.)
- The status of migration or displacement of cultural actors after the occurrence of natural disasters
- The situation of vulnerable affected groups (amateur writers and poets, daily paid handicrafts' labours, etc.)
- List of cultural services disrupted by disaster
- The access of workers in culture sector to alternative jobs
- The risk of changing in the culture context and traditional jobs

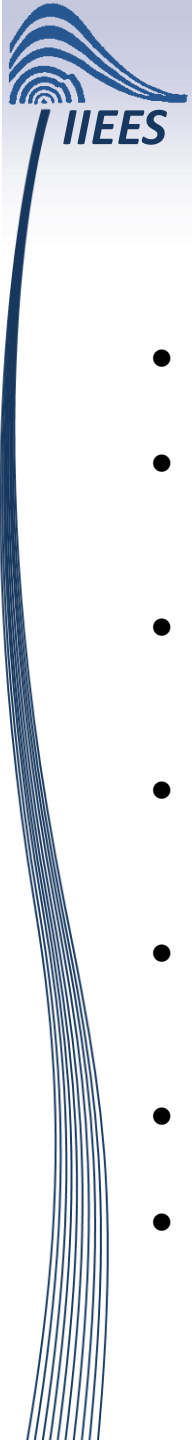


Damage Assessment

- It is also often impossible or very difficult to quantify the value of many cultural features (such as natural heritage, intangible cultural heritage, and many tangible heritage elements such as archeological sites, art objects, etc.).
- The replacement of some cultural assets, even with the necessary financial and technical facilities, is not possible without losing some of their credibility.

Row	Components	Subsection	Percentage of Damages	Value of damages (IRR B)	Insurance coverage (IRR B)	labor		
						Total	Female	Male
1	Mosques	Buildings and infrastructure						
2		Equipment and machinery						
3		Symbols and historical objects						
4		Total sum of rows 1 to 3						
5	Holyshrines	Buildings and infrastructure						
6		Equipment and machinery						
7		Symbols and historical objects						
8		Total sum of rows 5 to 7						
9	Religious delegations	Buildings and infrastructure						
10		Equipment and machinery						
11		Total sum of rows 9 & 10						
12	Other	Buildings and infrastructure						
13		Equipment and machinery						
14	To							
15	Total (sum of rows							

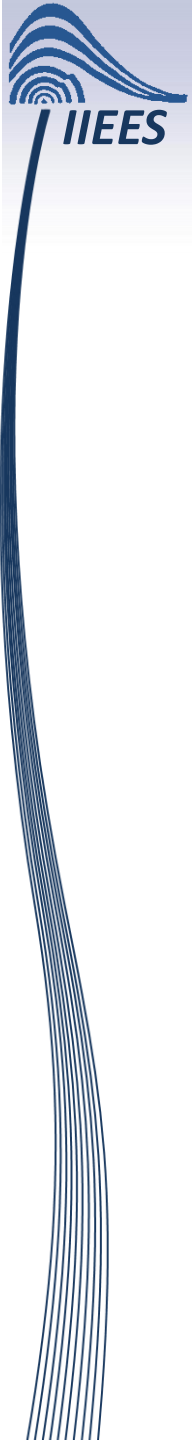
Row	Section	Damages (IRR B)		
		County1	County2	County3
1	Total damages to heritage / cultural / natural sites (based on Table 14)			
2	Total damages to cultural-religious sites (based on Table 15)			
3	Total damages to assets and movable property (according to Table 16)			
4	Total damages to intangible cultural heritage (based on Table 17)			
5	Total damages to the section of heritage sites and valuable works (according to Table 18)			
6	Total damages to the cultural and creative industries (according to Table 19)			
7	The sum of the total damages to the field of culture (sum of rows 1-6)			



Loss Assessment

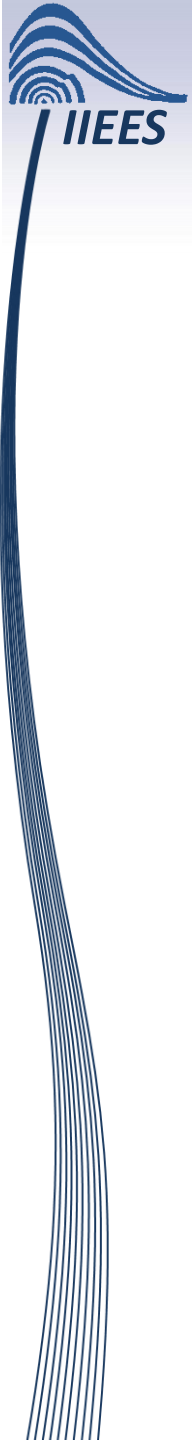


- Decreased income from temporary or permanent closure of cultural centers;
- Decreased revenue from impaired access to assets related to this area (for example, due to damage to the road network);
- Loss of income due to cessation of cultural and artistic activities (such as holding exhibitions, ceremonies, events and annual or periodic festivals);
- Imposition of economic damages due to disruption in the production and sale of goods related to cultural and creative industries;
- Costs related to emergency response measures to address the essential needs of cultural centers in order to prevent further damage to assets
- Costs related to maintain basic cultural services
- Costs associated with reducing the risk of secondary and new hazards.



Loss Assessment

Row	Subsection	Components	Decrease in income	cost increase (IRR B)	Recovery costs (IRR B)	Risk reduction costs (IRR B)	Total loss (IRR B)	Insurance coverage (IRR B)
1	Cultural and natural heritage and places	Cultural Heritage						
2		Natural heritage						
3		Related centers						
4		total						
5	Cultural- religious places	mosques,						
6		Holy shrines						
7		Hoseinies						
8		Other						
9		total						
10	Movable assets and collections	Movable artwork						
11		Antiques and historical works						
12		Natural works						
13		Old collections						
14		total						
15	Intangible cultural heritage	Oral Heritage						
16		Performing Arts						
17		Social activities						
18		Knowledge and skills						
19		total						
20	Heritage sites and valuable artworks	Museums						
21		Scientific and executive places						
22		Research - Exhibition						
23		Other						
24		total						
25	Cultural and creative industries	Handicrafts						
26		Cultural Products						
27		Books and publications						
28		Other						
29		total						
Total								



Evaluation of total damage and loss

Row	Subject	Damages (IRR B)	Losses (IRR B)					Total of Damages and losses (IRR B)
			Year of the accident	First year	Second year	other years	Total losses	
1	heritage and cultural / natural sites							
2	cultural-religious places							
3	assets and movable assets							
4	intangible cultural heritage							
5	heritage sites and valuable artifacts							
6	cultural and creative industries							
7	Total							

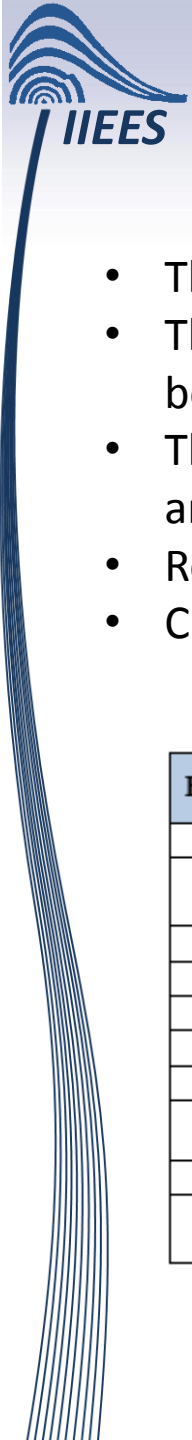


Economic and Social impacts

Macroeconomic impact

- Reducing the share of culture in GDP due to reduction of cultural production (i.e. handicrafts) or disruption in the provision of cultural services (such as festivals)
- Unforeseen financial burden for recovery of activities in this field
- Providing the necessary funds for the import of related items
- Long-term losses due to reduced production and export of various artworks and handicrafts (due to damage to workshops, studios, etc.)
- Decrease in the tax revenue of the government
- Increase government spending to compensate for the consequences of disasters (such as providing grants, loans, to set up handicraft workshops, etc.).

Row	Subject	County 1	County 2	County 3
1	The value of the total income from the field of culture (IRR B)			
2	The share of culture in GDP (%)			
3	The amount of damages and losses to the field of culture (IRR B)			
4	The rate of reduction of the share of culture in GDP due to losses and damages (%)			
5	The annual export value of cultural works and industries (IRR B)			
6	The rate of decrease in exports of cultural works and industries after the natural disasters (IRR B)			
7	The share of culture in the county's exports			
8	he decrease in the share of exports of works and industries in the field of culture(%)			
9	Increase in imports of items, equipment and machinery required in the field of culture(%)			
10	Reduction of government tax revenue (IRR B)			

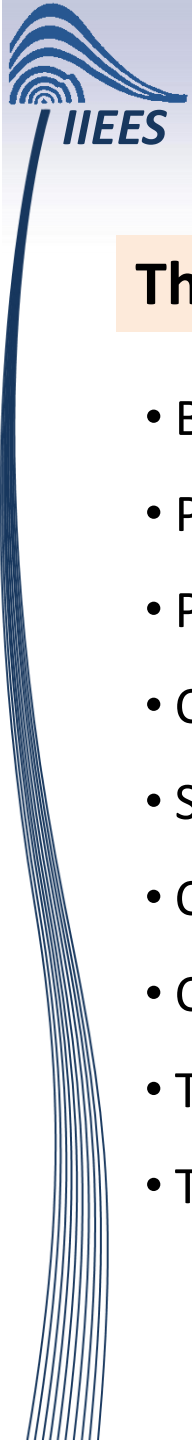


Economic and Social impacts

Impacts on Strategic Indicators

- The extent of change in urban-rural cultural-traditional and historical contexts
- The rate of change in the number of people in cultural-religious centers (gap in beliefs)
- The amount of change in the general budget allocated to the field of culture (the amount of difference before and after disasters)
- Reduced number of educational programs and students (i.e. in art and culture)
- Change in the number of citizens who actively participate in cultural activities

Row	Subject	County 1	County 2	County 3
1	Poverty rate in households working in the field of culture (%)			
2	Increasing poverty rate in households working in the field of culture due to natural disasters (%)			
3	The share of culture in household food security in the county (%)			
4	The decrease in the share of culture in food security in the county (%)			
5	Number of people working in the field of culture of each county (people)			
6	Number of people who have lost their jobs due to natural disasters (people)			
7	Average annual income of people working in the field of culture (IRR M)			
8	Decrease in income of people working in the field of culture (IRR M)			
9	The share of culture in employment and household income in the county (%)			
10	Reducing the share of culture in employment and household income in the county (%)			

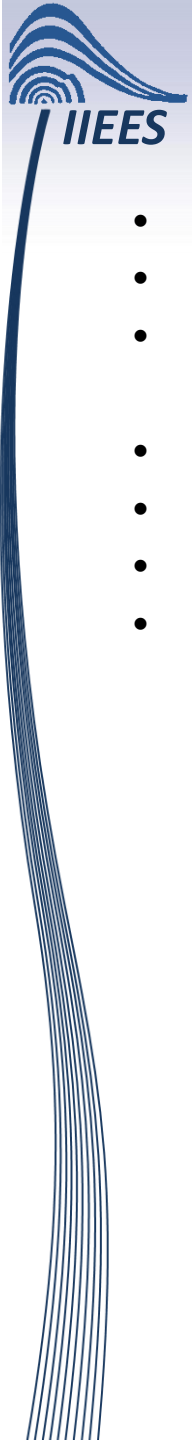


Recovery and Reconstruction



The main strategies of reconstruction and recovery

- Building Back Better (BBB)
- Promoting resilience
- Preservation of identity
- Compatibility with local and climatic conditions
- Sustainable Development Strategies
- Community participation and use of local knowledge and skills
- Coordinated and coherent approaches to recovery
- The need to pay special attention to vulnerable groups
- Transparency and accountability

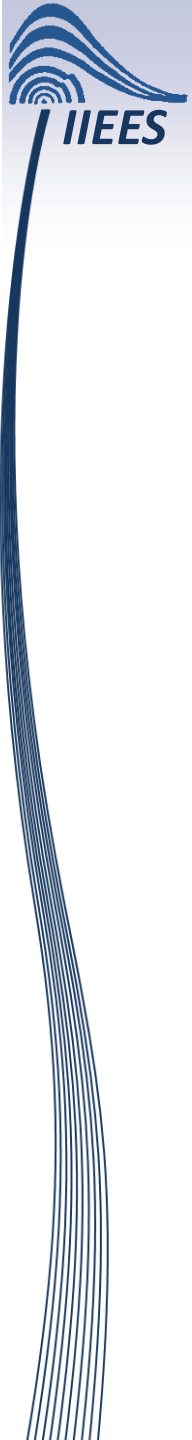


Estimation of reconstruction needs



- Cost of repair / reconstruction of damaged / destroyed cultural centers
- Cost of replacing or repairing property and equipment
- Necessary Interventions to the protection of damaged buildings, structures, tangible cultural heritage, and the collection of movable property
- Providing security for cultural assets
- Transportation and relocation costs
- Secondary hazards' risk reduction
- Installation and setting up of monitoring and early warning systems

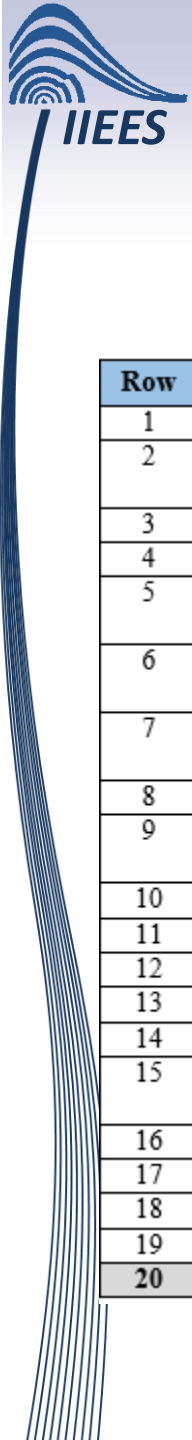
Row	Reconstruction measures	Required credits (IRR B)
1	Repair of damaged / destroyed cultural centers	
2	Implementation of reconstruction strategies to repair damaged / destroyed cultural centers	
3	Replacement or repair of property and equipment	
4	Implement remediation strategies to replace or repair property and equipment	
5	Quick recovery of security systems	
6	Perform necessary interventions	
7	Land acquisition and the cost of branches for the transfer and relocation of infrastructure and cultural centers	
8	Implement reconstruction strategies for the transfer and relocation of cultural centers or assets	
9	Establish safe storage centers for transferred objects and property	
10	Reduce secondary risk	
11	Establishment of rapid alert systems in cultural centers	
12	Establish risk monitoring systems	
13	Implementation of resilience strategies in hardware dimensions	
14	Implementation of other reconstruction strategies (sustainable development, adaptation, etc.)	
15	Other reconstruction measures	
Total		



Estimation of recovery needs

- Resumption of cultural activities
- Supporting affected jobs in the field of culture
- Providing livelihood assistance
- Getting people involved in rehabilitating the activities
- Capacity building in cultural centers for disaster management
- Build local capacities to maintain cultural centers
- Addressing social challenges
- Training programs
- Creating legal bases
- Restoration of governance capacities

Row	Rehabilitation measures	Credits required for rehabilitation (IRR B)
1	Resumption of cultural activities	
2	Supporting damaged jobs in the field of culture	
3	Providing livelihood assistance	
4	Attract people's participation	
5	Capacity building in cultural centers for disaster management	
6	Build local capacity to maintain cultural centers	
7	Addressing social challenges	
8	Provide training programs	
9	Creating legal bases	
10	Restoration of governance capacities	
11	Plan and implement actions related to reducing risk and promoting resilience	
12	Use of international capacities	
13	Provision of temporary facilities	
14	Development of risk transfer and insurance mechanisms	
15	Carrying out preparations for cultural centers	
16	Database development	
17	Implement other rehabilitation strategies	
18	Other (with mention of case)	
Total		



Time frames for implementation of recovery and reconstruction plans

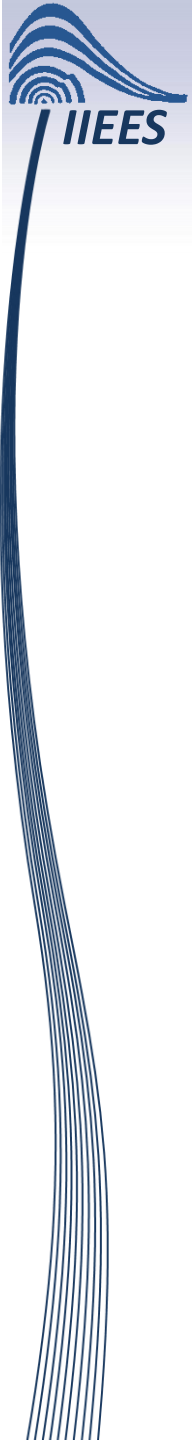
- **Short-term:** Activities that can be done over a maximum of 18 month period
- **Medium-term:** Activities to be implemented in 18 to 36 months
- **Long-term:** Activities to be implemented within 36 to 60 months

Row	Reconstruction and rehabilitation measures	Required credit (IRR B)
1	Repair, repair and reconstruction of damaged / destroyed cultural centers	
2	Implement reconstruction strategies to repair, repair and rebuild damaged / destroyed cultural centers	
3	Replacement or repair of property and equipment	
4	Implement remediation strategies to replace or repair property and equipment	
5	Acquisition of land and provision of necessary branches for the transfer and relocation of infrastructure and cultural centers	

Row	Reconstruction and rehabilitation measures	Required credit (IRR B)
6	Implement centers	
7	Providing activities	
8	Quick re	
9	Carrying centers	
10	Take the	
11	Establish	
12	Support	
13	Facilitat	
14	Provide	
15	Promoti organiza	
16	Involve	
17	Address	
18	Restorin	
19	Use of i	
20		

Row	Reconstruction and rehabilitation measures	Required credit (IRR B)
1	Continue to implement reconstruction strategies to repair, repair damaged / destroyed cultural centers	
2	Continue to implement reconstruction strategies for the transfer cultural centers or assets	
3	Establish safe storage centers for transferred objects and property	
4	Continue to support damaged jobs in the field of culture	
5	Capacity building in cultural centers for disaster management	
6	Develop the necessary programs to deal with the consequences in this area	
7	Build local capacity to preserve cultural assets	
8	Attract and train volunteers to participate in the preservation of monuments in times of crisis	
9	Continue to support affected jobs	
10	Carrying out cultural interventions to promote a sense of belonging and social anomalies after accidents	
11	Provide training programs related to risk reduction and crisis management to stakeholders in this field	
12	Improving the readiness of cultural stakeholders to face crises	
13	Develop legal frameworks to protect the field of culture against	
14	Establishment of rapid alert systems in cultural centers	
15	Establish risk monitoring systems	
16	Plan actions related to reducing risk and promoting resilience in	
17	Development of risk transfer and insurance mechanisms in accordance with socio-economic conditions of different regions	
18	Establish sustainable interactions to use international capacities to reduce disaster	

Row	Reconstruction and rehabilitation measures	Required credit (IRR B)
1	Implementation of disaster risk reduction measures in different parts of this area according to the existing risks	
2	Reducing the vulnerability of cultural assets	
3	Reduce secondary risk	
4	Operation of rapid alert systems in cultural centers and implementation of relevant protocols	
5	Utilization of risk monitoring systems in cultural centers and implementation of relevant protocols	
6	Implementation of resilience strategies in hardware and software dimensions	
7	Implement sustainable development strategies	
8	Implement adaptation strategies	
9	Adopt and implement the required laws and bills regarding capacity building in the field of culture against disasters	
10	Take measures to promote resilience	
11	Establishment of support funds and other risk transfer mechanisms in the field of culture	
12	Institutionalization of asset insurance in this area against accidents	
13	Capacity building in cultural-religious centers to play a role as a base for crisis management in the neighborhood	
14	Establish the necessary structures to access related databases and establish appropriate mechanisms for updating data	
15	Implement other reconstruction and rehabilitation strategies	
16	Total	



IIEES



Regional Education and
Research Center on Earthquake
Risk Management and Resilience
for West and Central Asia

PDNA Application



IIEES

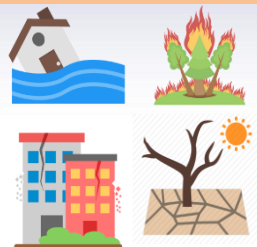
19 Sectors

Agriculture
Commerce
Community Infrastructure
Culture
Disaster Risk Reduction
Education
Environment
Gender
Governance
Health
Housing
Livelihood
Macroeconomic Impact
Manufacturing
Telecommunication
Tourism
Transportation
Wash
Energy

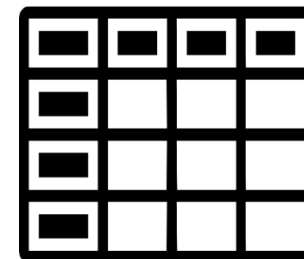
434 Counties
in Iran



Various Natural
Disasters



More Than 600
Tables



14 Out of 19 Ministries
involve directly in PDNA



security
& Reliability



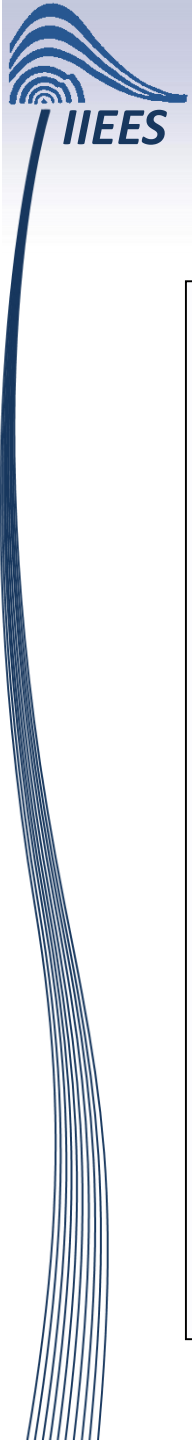
Fast Data Entry
& Integration

high
precision

easy to update
and modify

minimize
errors

PDNA WEB APPLICATION



Review of the Web Application

Login to system

National code

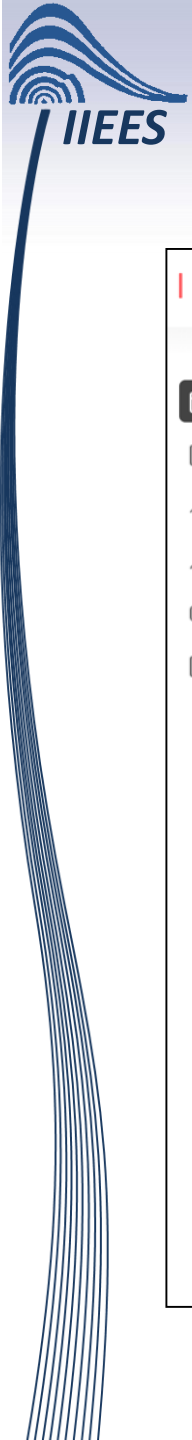
|

Login to system

The Post-Disaster Needs Assessment system

Throughout history, Iran has always been exposed to natural hazards with geological or meteorological origin. In the last two decades, various natural disasters have occurred in this country, some of which have caused casualties and extensive economic damages. In most of the cases, the social and economic effects of such disasters persist for years after the events and have affected the development of society.

The post-disaster needs assessment system is a tool for collecting basic information on the effects of any natural disaster, including injuries, damages and consequences, as well as reconstruction and rehabilitation needs after natural disasters, in order to provide the necessary information for the government agencies to provide and allocate funds needed for reconstruction and rehabilitation.



Review of the Web Application



The Post-Disaster
Needs Assessment system

فارسی

test
Expert no. 1

Logout

Dashboard

Events

Roles

Users

Settings

Download

Select Province

Select County

Table Type

✖ East Azerbaijan

✖ Azarshahr

Basic

Select Tags

Enter your phrase

Matched Tables

Search

No.	Code	Title	Tag
1	1	Baseline Information on the Participation of Different Subsectors of Agriculture Sector in the Economy	General
2	2	Baseline Information Related to the Lands in Agriculture Sector	General
3	3	The Level of Participation of Different Agricultural Subsectors in Food Security and Export of the County	General
4	4	Baseline Information Related to Employment in Agriculture Sector	General
5	5	Baseline Information in the Related products of Agriculture and Horticulture in each County	Agriculture (crops
6	6	General Status of Cultivation Pattern	Agriculture (crops
7	7	Baseline information on Livestock, Poultry and Beekeeping Products in each County	livestock, poultry,



Review of the Web Application



- Dashboard
- Events
- Roles
- Users
- Settings
- Download

Select Province

×

East Azerbaijan

Select County

×

Azarshahr

Table Type

Damage

Select Event

×

Lorestan Flood

Select Tags

Enter your phrase


Matched Tables


Search

Code	Title	Tag
18	Damages in in the Agriculture (Crops) and Horticulture Subsector's Production in each County	Agriculture (c
19	Damages to the Livestock, Poultry and Apiculture Subsector's Products in each County	livestock, pou
20	Information related to livestock, poultry, and bee colonies casualties in each county	livestock, pou
21	Damages in the aquaculture subsector's products in each county	Fishing and ac
22	Damages to the man-made forests in each county	Forestry D



Review of the Web Application


 **The Post-Disaster
Needs Assessment system**


 Dashboard


☒ **Events**


Event List


Create Event


 Roles

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Event Title (EN)

Event Title (FA)

Event Type

Province

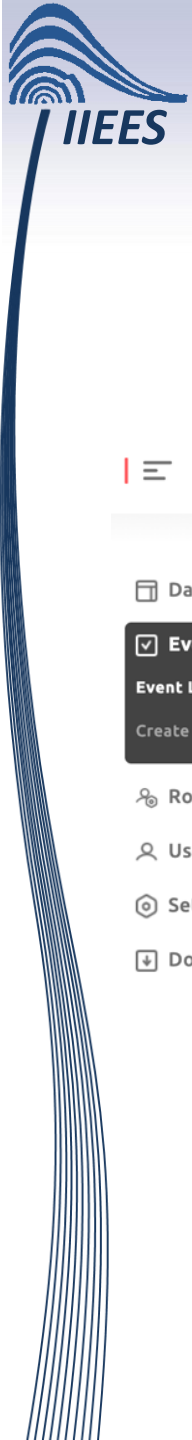
Date

Description (EN)

Description (FA)

Back


Submit



Review of the Web Application

The Post-Disaster
Needs Assessment system

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Dashboard

☒ Events

Event List

Create Event

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Event List

Create Event

No.	Event Title	Event Type	Date	
1	EarthQuake	Earthquake	1399-09-09	×
2	Lorestan Flood	Floods	1399-09-02	×
3	flood	Floods	1399-09-06	×

Event List

Create Event

No.	Event Title	Event Type	Date	
1	EarthQuake	Earthquake	1399-09-09	×
2	Lorestan Flood	Floods	1399-09-02	×
3	flood	Floods	1399-09-06	×

Reconstruction and Recovery Needs



Thank
you!