

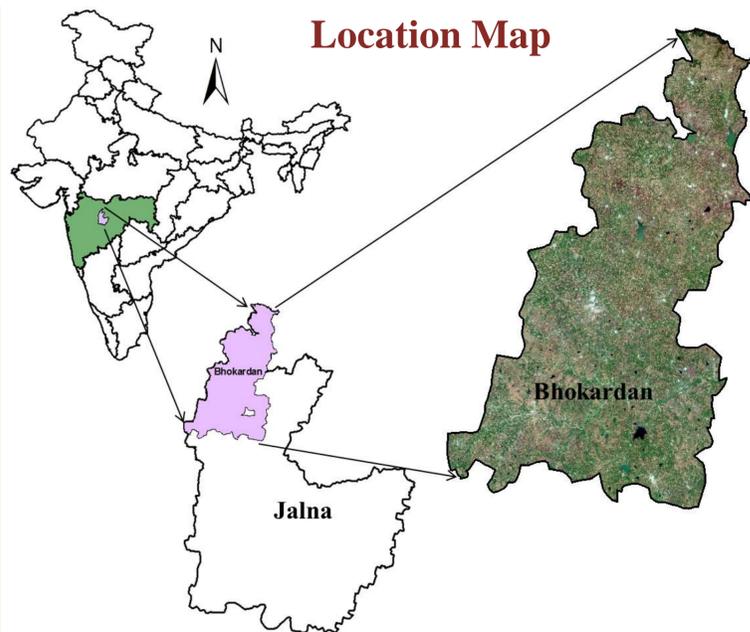
Understanding the vulnerabilities and resilience of the local communities to climatic and non-climatic risks

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Context

Vulnerability assessment tools may be used at multiple scales when adaptive planning is needed to reduce climate and non-climate stresses. To design feasible and sustainable interventions that emerge from vulnerability assessment recommendations, the analysis must consider local people's needs and aspirations and their socio-economic contexts (Ribot, 2010).

This study is an attempt to understand how the climatic drivers of change affect the land and water resources, agriculture and livestock, the main livelihood sources of the people. It also helps to understand how these will affect rural communities in the context of the economic and social change they are experiencing and evolve ways that will enable them to cope with, adapt to and benefit from the challenges faced. To achieve the objectives of vulnerability assessment **CoDriVE-PD** tool was used.



Community Driven Vulnerability Evaluation-Program designer

(CoDriVE-PD)

The framework of the tool CoDriVE-PD is based on:

- Driver-Pressure-State-Impact-Response (DPSIR; EEA, 2007);
- the UK Department for International Development's Sustainable Livelihoods Framework (DfID, 1999);
- the IISD's Community Risk Screening Tool: adaptation & livelihoods – CRiSTAL (IISD, 2012)

CoDriVE-PD helps to make a quick but precise assessment of the climate risks and vulnerabilities of an area through community engagement. It helps build a vulnerability context; identifies climate risks and trends; and builds an adaptation response/coping mechanism inventory that aids evaluation and tracking

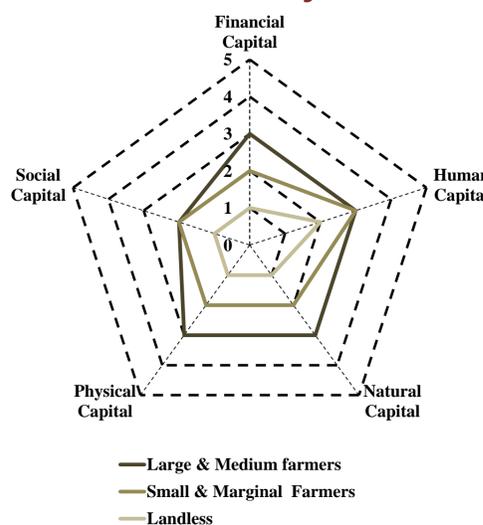
Climatic & non-climatic risks

- Delayed onset of monsoon
- Drought; prolonged dry spells
- High intensity rainfall
- Unseasonal rainfall
- Rise in temperature
- Lengthening of summer days
- Hailstorms
- Market pressure
- Wildlife conflict

Recommendation plan

Responses (attempt to cope)	Recommendations
<ul style="list-style-type: none"> • Deepening of wells and increased in digging of bore wells • Increase in use of chemicals (fertilizers) • Spraying chemical pesticides • Mulching sheets are used on standing crops to reduce evaporation (few farmers) • Livestock camps organized by government. • Distress migration in search of livelihoods (Landless, Small and marginal farmers) • Increase uptake of crop loans from formal and informal sectors; crop insurance (few farmers) 	<ul style="list-style-type: none"> • Use micro-irrigation (Drip and sprinkler) • Water budgeting • Cultivation of indigenous crop varieties and short duration drought resistance crop varieties • Use of organic manures and green manure • Foliar spray and soil application of organic formulations like <i>Amritpani</i>, <i>Jevvamrit</i> etc. • Eco-friendly pest and disease management practices • Mulching with crop residues • Training of farmer groups in the preparation of feed for livestock • Promotion of non-farm livelihood opportunities with various government schemes • Promotion of women entrepreneurship through SHGs • Promotion of crop insurance schemes • Weather based crop advisory services

Vulnerability of the different land holding groups



Large and medium farmers

- More assured *kharif* and *rabi* production
- Grow commercial and food crops
- Better access to physical assets
- Participation in CBOs

Small and marginal farmers

- Crop production and water resources are less secure
- Food security is met mainly from the PDS and market
- Grow commercial crops majorly
- Limited access to physical access

Landless

- Don't have access to land resources
- Majority of them are unskilled
- Rearing small ruminants only
- No participation in CBOs



Significance of work for policy and practice

- Using vulnerability evaluation tool, strategic recommendations can be done which would direct, government or policy makers to incorporate it in the policy at block (sub-district), village and district level and for implementation
- Govt. of Maharashtra, India has adopted this methodology and prepared cluster level adaptation plan under Integrated Watershed Management Program.

