



Rulebook

National Climate Stack Innovation Challenge

MARCH 2026

Gates Foundation **Dalberg**

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Agriculture sector is at risk from escalating climate hazards that are reducing yields, straining natural resources, undermining farmer livelihoods, and slowing climate-smart investments

India is among the most climate-vulnerable countries, with hazards rising in frequency and intensity

7th

in Global Climate Risk Index of countries most affected by climate change

8x

rise in the frequency of flood events nationally over the past 50 years

85%

of days across the year recorded at least one extreme weather event in 2022

36%

rainfall deficit in peak monsoon of August 2023, India's driest since 1901

India's farmers are experiencing climate pressures in declining yields, income instability, & reduced productivity



Climate-driven weather variability is projected reduce crop yields by ~9% between 2010 2040, disrupting agricultural productivity



More frequent and severe climate extremes (droughts, floods) threaten farm livelihoods, risking a 20–25% income decline



Land degradation & declining soil productivity driven by poor soil management, population pressure are compounding challenges



Repeated climate shocks keep farmers in recovery mode, limiting investment in long-term resilience-building measures

India requires near-term climate hazard forecasting that overcomes fragmented data, siloed models, and ground-truth gaps in its digital ecosystem

Gaps in India's existing disaster response financial systems...



Reactive, delayed response:

Disaster relief and farmer support triggered after losses, with delayed payouts



Overstretched public funds:

SDRF/NDRF disburse large amounts but are not forecast linked



Insurance gaps persist:

PMFBY has reached scale yet weak hazard triggers limit timely protection

...require bridging friction factors in India's digital ecosystem...



Data fragmentation:

Climate risk data is scattered across actors and poorly interoperable



Siloed models:

Proprietary models within institutions restrict access and innovative use cases



Trust and ground-truth gaps:

Limited ground data and weak governance hinder data sharing

...to unlock credible near-term climate hazard forecasting



Anticipate local impacts:

Enable planning for agriculture, water, and infrastructure risks



Bridge planning horizons:

Connect seasonal forecasts with long-term climate scenarios



Enable targeted action:

Support crop-specific farmer advisories and improve risk pricing

NABARD aims to convert the need for credible climate hazard forecasting into a national opportunity by advancing DiCRA as a Digital Public Infrastructure through this Challenge

DiCRA is already a collaborative digital platform with open, high-resolution climate intelligence for rural India...



AI analytics to assess farm climate vulnerability



Open geospatial datasets across 50M+ hectares



Collaborative platform for data and insights



High-resolution intelligence on 20+ parameters



...but can transform into an operational backbone for climate resilience with...

Robust predictive models with



- Near term 10–15-year localized hazard forecasting
- Operational dashboards and sectoral use cases translating projections into actionable insights

...and backed by



Interoperable data standards



Structured API integrations



Transparent modelling frameworks



Governance protocols for data access



Sustained institutional adoption

NABARD aims to convert the need for credible climate hazard forecasting into a national opportunity by advancing DiCRA as a Digital Public Infrastructure through this Challenge

The National Climate Stack Innovation Challenge was launched at the Bharat Climate Forum 2026 with one key objective...

...and a chance to win monetary awards and opportunities for NABARD partnership to build DiCRA 2.0



Develop a viable framework for a National Climate Stack for Rural India which includes

1

Credible **near-term climate hazard forecasting models** (10–15 years) that generate granular projections using DiCRA and other public datasets.

2

Decision-ready dashboards and sectoral use cases that translate these projections into actionable insights for agriculture, finance, and public policy.



₹30,00,000

total cash prize for top 3 winners



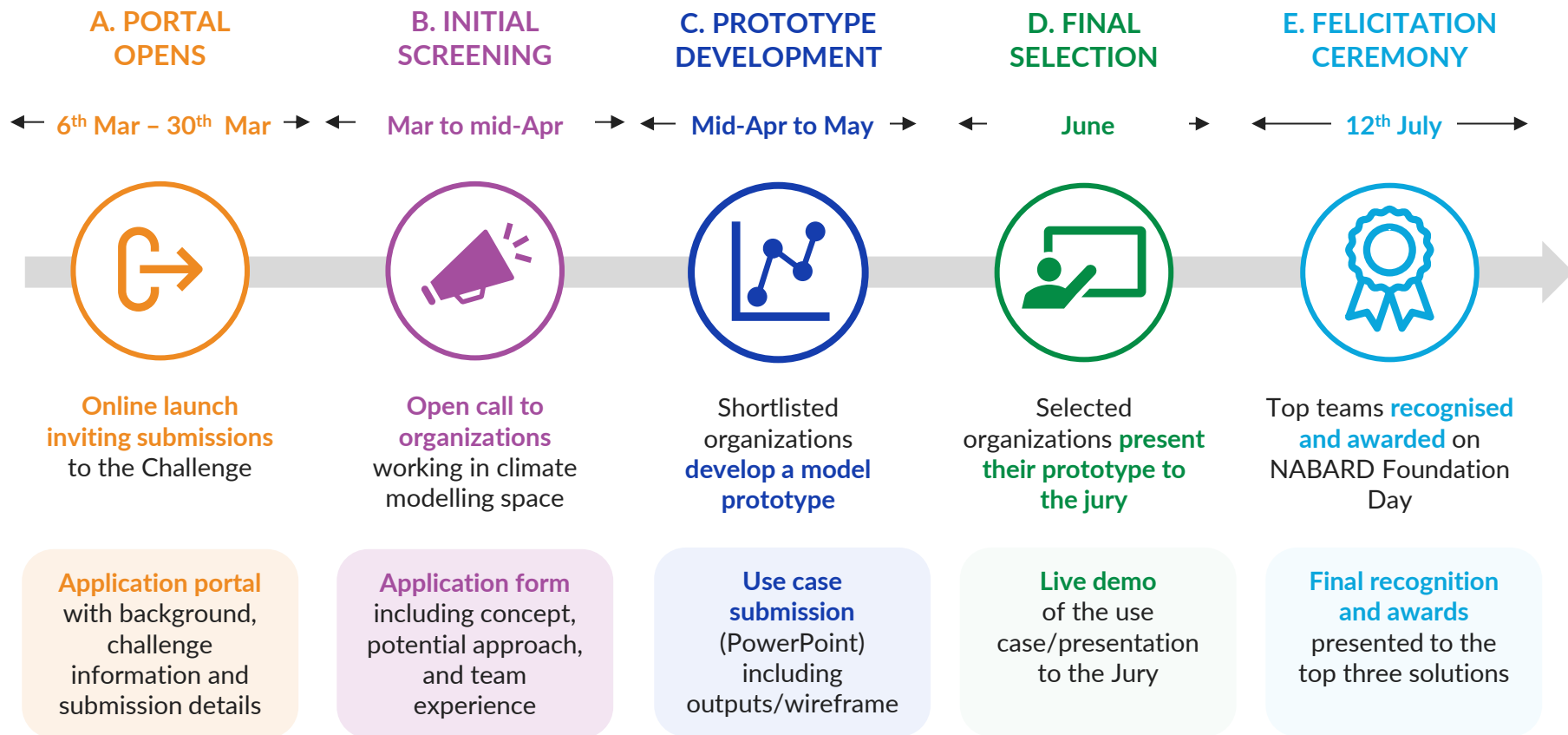
NABARD partnership
to build DiCRA 2.0

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The Challenge will run from 6th March to 12th July, with submission of proof of concept, model development with a TAG, and a final technical validation culminating in a pitch to the jury



Applications will progress through a rigorous three-stage process from screening to the final selection



Initial Screening

Requirements

- Applications must be submitted through the **official online portal**.
- All sections of the submission form are compulsory and must be **completed in full**.

Key dates

- Portal opens: **6th March**
- Last date: **30th March**

Next steps

- **~20 applicants** will be shortlisted to proceed to the Model Development stage.



Model Development

- Submitted concepts must be developed into **wireframes**.
- Technical Advisory Group members will provide **mentoring sessions** to applicants.

- Mentoring session: **Mid April – May**
- Model submission: **Week of 25 May**

- **~10 applicants** will be shortlisted to proceed to the Final Selection stage.



Final Selection

- Shortlisted applicants must create a **live demo** of their use case.
- The live demonstration must be presented in the form of a **virtual pitch** before the jury panel.

- Final presentation: **TBD**
- Award ceremony: **12 July, NABARD Foundation Day**

- **3 winners** will be selected following the jury evaluation.



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The Challenge is open to teams from eligible organisations across the private sector, research, academia, and public sector – individually or as a consortium

Teams of 3–5 members may represent a single organisation, a consortium of organisations within the same category, or a cross-category consortium spanning two or more categories



Private Sector

- Startups (climate-tech, agri-tech, fintech, analytics etc)
- Corporations and technology firms
- Data analytics and geospatial firms
- Impact investment funds and advisory firms
- Climate risk modelling and consulting firms



Research Institutions

- National research laboratories (e.g., IMD, SAC, NRSC, NARL)
- ICAR institutes and affiliated research centres
- International research organisations (e.g., ICRISAT, CGIAR centres)
- Climate, meteorology, or earth system research institutes
- Policy research think tanks with modelling capabilities



Academic Institutions

- IITs, IISc, IISERs, and institutions with expertise in relevant fields
- Central and State Universities
- Agricultural Universities and State Agricultural Universities
- Engineering and technology institutes with technical capabilities
- IIMs/other management schools with research focus

Teams must be affiliated with an organisation within the following categories to enable effective long-term scaling and implementation in partnership with NABARD.

The Challenge expects multidisciplinary teams with complementary capabilities across data modelling, climate expertise, and business or policy application

1. Data Modeller / Technical Lead



- **Expertise in climate, geospatial, or risk modelling** using statistical, machine learning, hybrid approaches.
- Experience **working with large-scale datasets**, including remote sensing, time-series, or geospatial data.
- Ability to document methods clearly, communicate uncertainty, and support reproducibility and validation.

2. Climate or Agriculture Domain Expert



- **Deep understanding** of climate processes, agricultural systems, or **agro-climatic risks** relevant to India.
- Ability to **interpret model outputs in the context of crops, water, soil, and farming practices**.
- Experience translating climate or agronomic insights into actionable guidance or research outputs.

3. Business or Policy Expert



- Understanding of how **climate risk influences decision-making in finance, insurance, agriculture, or public policy**.
- Ability to **frame use-cases that align with real-world decisions**, incentives, and institutional constraints.
- Experience engaging with stakeholders such as financial institutions, government agencies, or farmer-facing organisations.

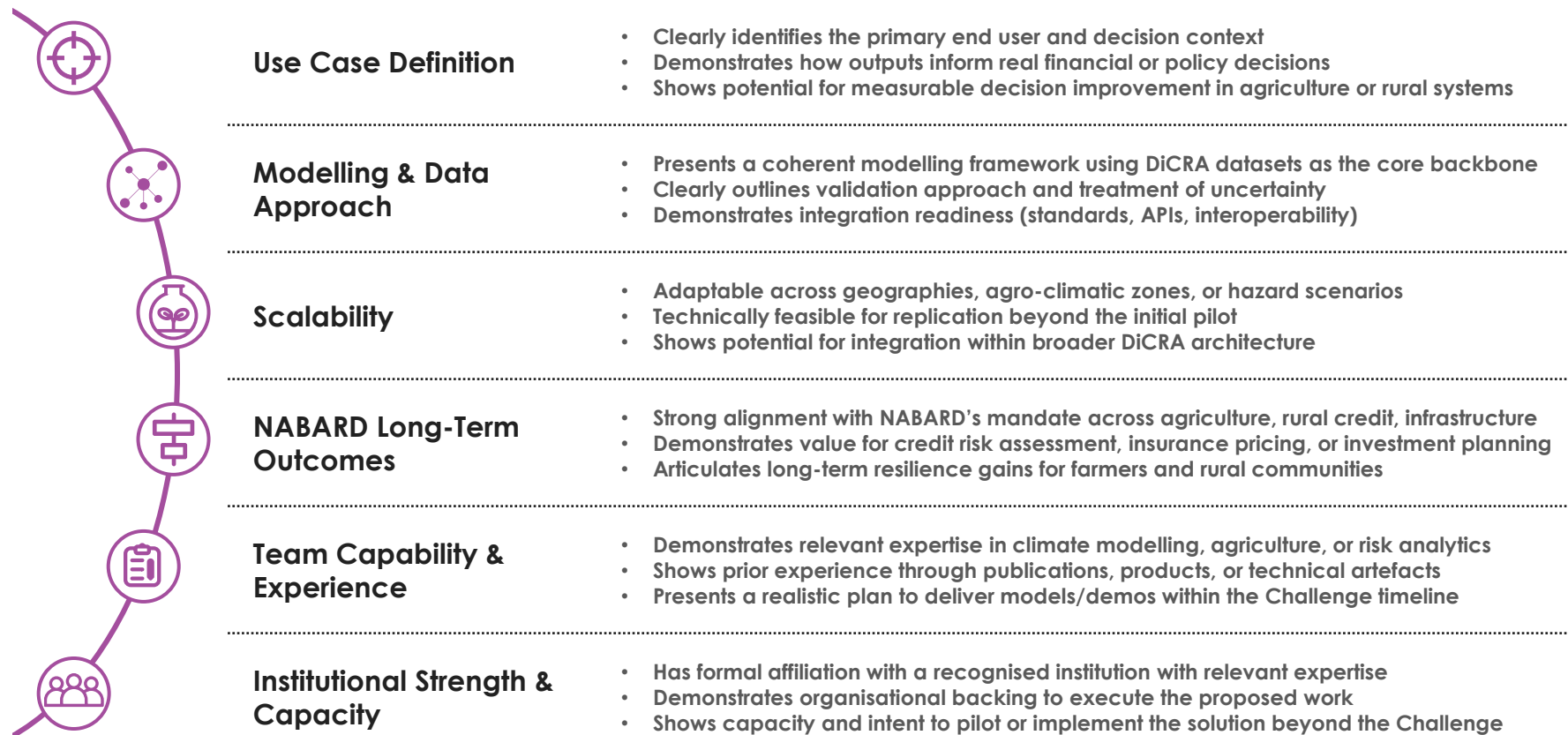
Note: These profiles are representative examples; teams may include other relevant capabilities

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The initial screening will assess submissions across use case, data approach, scalability, alignment with NABARD, team capability, and institutional strength



Developed models will be evaluated on technical excellence, forecast credibility, system integration, clarity, decision impact, and readiness for real-world deployment

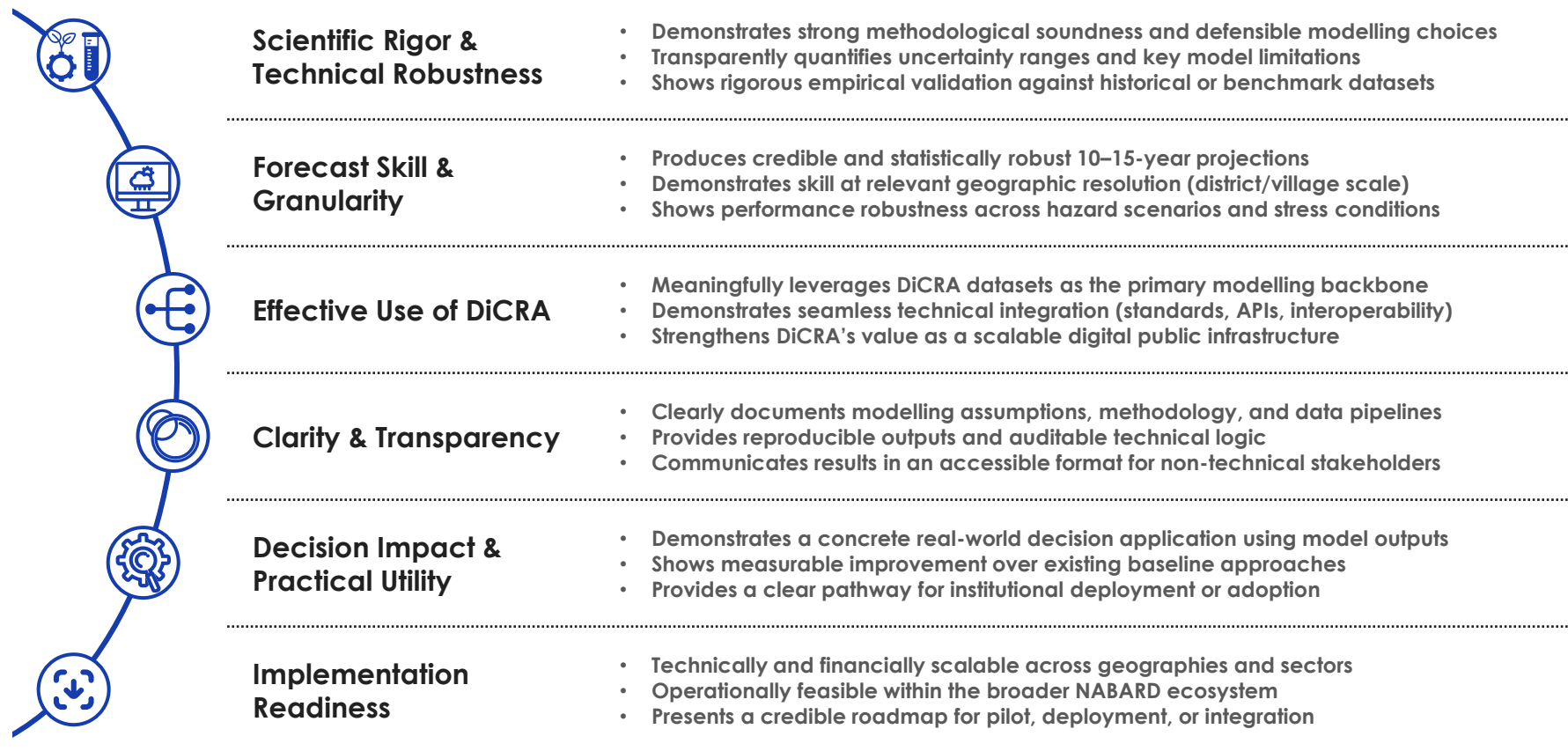


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Participants need to develop climate intelligence solutions by linking one or more climate hazards with one or more priority rural development sectors.

Hazards



Heat
Waves



Extreme
Precipitation



Floods



Cyclones



Drought



Landslides



Climate-resilient Agriculture



Climate Information Systems



Climate-resilient Infrastructure



Decentralised Renewable Energy



Coastal Vulnerability



Livestock Management
and Adoption



Water Management and
Conservation



Sustainable Livelihoods



Afforestation and Reforestation



Waste Management

Innovation Challenge focus sectors

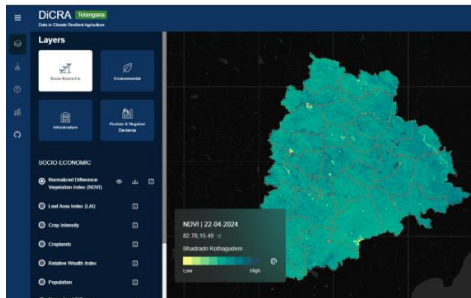
Participants need to demonstrate how DiCRA can power a National Climate Stack—from data and forecasting to interoperable applications

Step 1: Build on DiCRA's Data Foundation with other public datasets

Use DiCRA's harmonised climate, weather, and geospatial datasets as the core backbone for modelling and analysis.

Additional open or proprietary datasets may be layered to strengthen models.

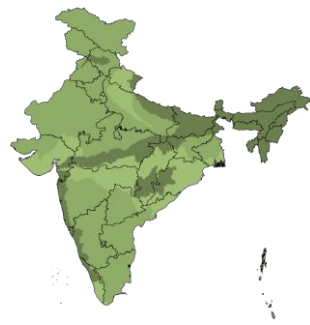
DiCRA Dataset



Step 2: Generate Near-Term Climate Forecasts (10–15 Years)

Apply robust models to produce credible, location-specific projections of climate hazards over the next decade.

Flood prediction 2030

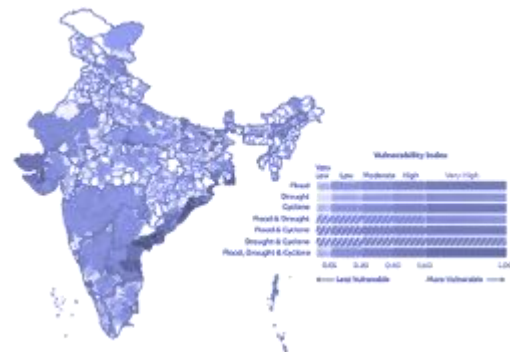


Probability: Low Moderate High

Step 3: Translate Forecasts into Climate Stack Use-Cases

Demonstrate one or more use cases built on these projections, showcasing API-based integration, interoperable standards, and scalable architecture using the DiCRA ecosystem.

Wheat Yield Index



1. What is the objective of the National Climate Stack Innovation Challenge?

The Challenge aims to advance credible **near-term (10–15 year) climate hazard forecasting** for India and translate climate data into **decision-ready intelligence** for agriculture, finance, and public policy.

2. Who can apply to the Challenge?

The Challenge is open to **research institutions, universities, startups, private-sector innovators, public sector innovators, and other multi-disciplinary teams** with expertise in climate science, data, agriculture, finance, or related domains.

3. What types of climate hazards are in scope?

Applicants may focus on **heat waves, extreme precipitation, floods, cyclones, drought and landslides** relevant to India's agricultural and rural systems.

4. Is use of DiCRA datasets mandatory?

Yes. All shortlisted solutions are expected to use **DiCRA datasets as the core data backbone**. Applicants may layer additional datasets where relevant, but DiCRA should remain central to the modelling approach.

5. Do applicants need to have an existing product or model?

An existing product, prototype, or prior publication is **not mandatory**, but applicants are encouraged to share links to any **existing models, demos, code repositories, or publications**, if available.

6. What is the timeline and time commitment for selected teams?

The Challenge will run from **March to June 2026**. Shortlisted teams should be available for a **6–8 week guided model development sprint**, including engagement with the Technical Advisory Committee.

7. What happens after the Challenge?

Top solutions will receive **cash awards** and may be considered for **post-Challenge pilots, integration with DiCRA, or adoption through NABARD and partner programmes**, subject to feasibility and relevance.

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The Challenge combines financial prizes with institutional partnerships and DiCRA integration to accelerate real-world deployment



Prize
Money

₹ 15 Lakhs
for **first** place

₹ 10 Lakhs
for **second** place

₹ 5 Lakhs
for **third** place



Pilot Support

NABARD partnership opportunities (DiCRA 2.0)

Select organization(s) will be provided opportunities for institutional scale
by integrating hazard forecasting models and use cases with DiCRA

APPLY NOW

www.climatestackinnovationchallenge.com

CONTACT US @

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