“Climate Quest Pakistan: Build a Resilient Nation”

A Climate Literacy & Action Game for Children (Ages 9–15)

1. Background & Rationale

Pakistan faces severe climate risks despite contributing less than 1% to global emissions. Children across the country have witnessed:

- Catastrophic floods (e.g., 2022 super floods)
- Urban flooding in Karachi due to drainage blockage
- Heatwaves in Sindh and Punjab
- Smog episodes in Lahore
- Glacial melt in Gilgit-Baltistan
- Drought in Balochistan

However, climate education in schools remains:

- Textbook-heavy
- Exam-focused
- Limited in practical application
- Not contextualized to Pakistan’s lived realities

“Climate Quest Pakistan” is an interactive, experiential learning game designed to teach climate literacy through real-life Pakistani scenarios.

2. Goal

To improve climate literacy among children in Pakistan by helping them:

- Understand causes and impacts of climate change
- Recognize Pakistan-specific vulnerabilities
- Learn adaptation and mitigation strategies
- Develop critical thinking and systems thinking
- Practice community-based resilience planning

3. Target Group

- Students aged 9–15
- Public and private schools
- Youth clubs and community centers
- Flood-affected and climate-vulnerable districts prioritized

4. Game Format

Hybrid Model:

1. **Physical Board Game** (for classrooms and low-resource settings)
2. Optional **Digital App Version** (Android-based, low-data)

Language:

- Urdu & English (regional translations possible)

Duration:

- 60–90 minutes per session

Players:

- 3–6 per group

5. Game Storyline

Players become “Climate Planners” responsible for building resilience across different regions of Pakistan.

The game board represents a map of Pakistan divided into climate zones:

- Indus River Belt (Flood Zone)
- Northern Mountains (Glacier Zone)
- Punjab Urban Belt (Heat & Smog Zone)
- Sindh Coastal Area (Sea-level & Cyclone Risk)
- Balochistan (Drought Zone)
- Karachi (Urban Waste & Drainage Crisis)

Each region has unique challenges.

6. Core Learning Modules & How They Teach

🌊 Module 1: Floods & Water Systems (Flagship)

Scenario Example:
Heavy monsoon rains hit the Indus basin. Water levels are rising.

Children must choose:

- Build homes near river for farming convenience
- Invest in embankments
- Plant trees upstream
- Improve drainage systems
- Relocate vulnerable households

Teaching Method:

- Cause & effect cards explain consequences of each choice
- Visual flood simulation (in digital version)
- "Resilience Points" awarded for long-term sustainable solutions

Learning Outcomes:

- Difference between natural hazard & human vulnerability
- Role of deforestation and encroachment
- Importance of early warning systems
- Understanding river systems

❄️ Module 2: Glacial Melt & Mountain Communities

Scenario:
Glaciers in northern Pakistan are melting faster.

Players must:

- Support early warning systems
- Relocate high-risk settlements
- Promote eco-tourism
- Reduce black carbon emissions

Teaching Method:

- Short info cards explain GLOFs (Glacial Lake Outburst Floods)
- Trade-off choices between short-term profit vs long-term safety

Learning Outcomes:

- Impact of rising temperatures
- Mountain ecosystems
- Climate migration

🌡️ Module 3: Heatwaves & Urban Planning

Scenario:
A severe heatwave hits Lahore.

Players choose:

- Plant urban trees
- Install rooftop solar
- Open cooling centers
- Ignore issue due to budget constraints

Teaching Method:

- Temperature meter on board rises or falls
- Public health impact cards

Learning Outcomes:

- Urban heat island effect
- Renewable energy
- Public health & climate link

🏜️ Module 4: Drought & Agriculture

Scenario:
Low rainfall season in Balochistan.

Choices include:

- Grow water-intensive crops

- Shift to climate-smart crops
- Use drip irrigation
- Invest in groundwater extraction

Teaching Method:

- Water resource tokens decrease/increase
- Soil health indicator

Learning Outcomes:

- Water conservation
- Sustainable farming
- Long-term resource management

🌫️ Module 5: Smog & Air Pollution

Scenario:
Smog season begins in Punjab.

Children decide:

- Promote public transport
- Enforce factory regulations
- Ban crop burning
- Ignore issue

Teaching Method:

- Air quality index tracker
- Health impact cards

Learning Outcomes:

- Sources of pollution
- Cross-border impacts
- Policy vs personal responsibility

7. Game Mechanics

🎲 Core Elements

Each team receives:

- Budget tokens
- Water tokens
- Energy tokens
- Community Trust points
- Biodiversity score

Players must manage limited resources.

Poor decisions reduce:

- Community trust
- Environmental stability

Smart decisions increase:

- Resilience score

Winning Condition:
Team with highest “National Resilience Score” at end wins.

8. Pedagogical Approach

The game uses:

- Experiential learning
- Problem-solving
- Scenario-based decision-making
- Visual cause-effect mapping
- Group discussion prompts

Each round ends with:
“Reflection Questions” for teachers:

- Why did floods worsen in your region?
- Could this happen in your city?
- What would you change?

This ensures deeper understanding beyond gameplay.

9. Skills Developed

Children develop:

- Climate literacy
- Critical thinking
- Systems thinking
- Budget planning
- Risk analysis
- Community empathy

10. Implementation Plan

Phase 1: Design & Prototype

- Develop board, cards, teacher manual

Phase 2: Pilot

- Test in 10–20 schools
- Collect feedback
- Refine content

Phase 3: Scale

- Distribute to schools nationwide
- Train teachers
- Partner with NGOs

11. Monitoring & Evaluation

Pre- and post-game assessment to measure:

- Understanding of flood causes
- Knowledge of climate adaptation
- Awareness of Pakistan-specific risks
- Behavior intention change

12. Long-Term Vision

- Annual inter-school Climate Challenge
- Youth Climate Leadership Program
- Expansion into advanced version (15–18 years)
- National digital leaderboard

13. Expected Impact

Within 3 years:

- 50,000+ children reached
- Improved climate literacy in vulnerable districts
- Stronger awareness of flood prevention
- Better understanding of sustainable behaviors

Why This Game Matters for Pakistan

Pakistan’s children are growing up in a climate crisis.

Instead of fear-based messaging, this game promotes:

- Understanding
- Responsibility
- Collective action
- Hope

It transforms climate education from theory into lived, practical problem-solving grounded in Pakistan’s reality.