Local Wisdom as Policy Capital : Cirebon's Disaster Resilience Model and Social Policy Reform from a Green Governance Perspective

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| ABSTRACT

This study analyzes the role of local wisdom as policy capital in strengthening disaster resilience and reforming social policy in Cirebon City through a green governance approach. Although not categorized as a high-vulnerability region like Sumatra, Cirebon faces increasingly complex ecological risks, including tidal flooding, coastal erosion, coastal environmental degradation, and weak social assistance distribution effectiveness. Simultaneously, the Cirebon community possesses rich local wisdom such as sedekah bumi (earth almsgiving), ngalokat cai (gathering of water), mutual cooperation (gotong royong), and communal solidarity, which have proven effective in maintaining socio-ecological balance and strengthening community adaptability. However, this cultural potential has not been optimally institutionalized in regional public policy, resulting in a gap between community social capital and top-down, administrative, technocratic policy formulation. This study uses a qualitative approach with normative analysis methods on disaster regulations and social policies, regional policy reviews, and field observations in vulnerable coastal areas of Cirebon.

The research findings indicate that social and disaster policies in Cirebon have not been strategically connected to the community's cultural values and practices, thus ineffective in building long-term resilience. Conversely, local wisdom has a strong adaptive function as a basis for strengthening social capacity, community-based mitigation, and environmental governance. Based on these findings, this article proposes an integrative policy model that includes four main components: (1) formal recognition of local wisdom in public policy design; (2) transformation of social assistance into resilience-strengthening schemes; (3) institutional collaboration between the government, traditional leaders, and communities; and (4) development of green governance indicators based on community resilience.

This study concludes that local wisdom is a strategic policy asset in building inclusive, ecological, and sustainable disaster management and social policies. Integrating cultural values into a green governance framework not only strengthens community resilience but also supports the achievement of the Sustainable Development Goals (SDGs), particularly in the areas of climate action, terrestrial ecosystems, and responsive institutions.

| KEYWORDS

local wisdom, policy capital, disaster resilience, green governance, social policy reform, Cirebon.

I. INTRODUCTION

Global climate change and ecological degradation have become serious challenges to governance in various countries, including Indonesia. The increasing frequency of hydrometeorological disasters, such as coastal flooding, drought, coastal erosion, and sea level rise, requires local governments to develop more adaptive, inclusive, and sustainable policy approaches. In this context, Cirebon City—although not among the areas with the highest level of disaster vulnerability—faces increasingly intense ecological risks due to changes in the coastal landscape, population growth, and environmental pressures resulting from uncontrolled development.

Geographically, Cirebon is a coastal area experiencing various environmental challenges, including periodic tidal flooding, coastal erosion threatening residential areas, seawater intrusion, and environmental degradation in low-

income communities. This vulnerability is exacerbated by the ineffective implementation of social policies that should serve as a protection system for vulnerable groups. Social assistance programs such as the Family Hope Program (PKH), the Non-Cash Food Assistance Program (BPNT), and the Direct Cash Assistance Program (BLT) remain distributional in nature and have not been able to strengthen communities' adaptive capacity to ecological risks.

On the other hand, the Cirebon community possesses socio-cultural capital in the form of local wisdom that has been formed and passed down through generations, such as sedekah bumi (earth almsgiving), ngalokat cai (water offering) , the tradition of mutual cooperation (gotong royong), and strong patterns of communal solidarity. These practices not only represent cultural identity but also play a strategic role as mechanisms of ecological and social adaptation. For example, the ngalokat cai tradition serves as a means of maintaining the sustainability of water sources, while mutual cooperation serves as the basis for strengthening social networks in times of emergency or crisis. This demonstrates that local wisdom has great potential as a community-based policy instrument aligned with the principles of sustainability.

However, the integration of these cultural values into public policy remains minimal. Disaster management and social policy at the regional level are still dominated by top-down, technocratic, and administrative approaches, resulting in policies that are out of context and less responsive to the socio-cultural realities of local communities. This gap prevents policies from generating long-term impacts, particularly in strengthening community resilience.

In response to these issues, green governance offers an innovative approach that combines the principles of ecological sustainability, public participation, environmental justice, and community-based governance. This approach positions communities as key actors in disaster mitigation and adaptation and emphasizes the importance of integrating cultural values into policy formulation. Therefore, developing a disaster resilience model based on local wisdom is relevant and urgent for implementation in the Cirebon context.

This article aims to analyze the potential of local wisdom as a policy tool to strengthen community resilience and reform social policy in Cirebon City. Using a qualitative approach, this article provides an in-depth understanding of how local wisdom can be institutionalized within green governance and offers an integrative model that can serve as a reference for local governments in formulating more effective, inclusive, and sustainable social and disaster policies

II. METHODOLOGY

This study uses a qualitative approach to deeply explore the role of local wisdom as policy capital in building disaster resilience and reforming social policy in Cirebon City from a *green governance perspective* . A qualitative approach was chosen because it can explore meanings, cultural practices, social experiences, and policy dynamics that cannot be explained quantitatively.

2.1 Research Approach

qualitative, descriptive-analytical approach was used to comprehensively understand the phenomenon based on the social, cultural, and ecological context of the Cirebon community. This approach emphasized the interpretation of field data, regional policies, and local wisdom practices with the goal of developing a conceptual model that can be applied to public policy.

2.2 Research Location

The research was conducted in the Cirebon City area with a focus on:

1. **Coastal areas** , such as Lemahwungkuk, Kesunean, Kejawanan, and Panjunan, have a high risk of tidal flooding and abrasion.
2. **Sub-districts and communities receiving social assistance** , to evaluate the effectiveness of social policies and the adaptive capacity of the community.
3. **The environment of traditional communities and cultural leaders** , where local wisdom practices are carried out.

2.3 Types and Sources of Data

This study uses two main types of data:

1. Primary Data

Primary data was obtained from:

a. **Field observations** related to social conditions, cultural activities, ecological risks, and local wisdom practices.

b. **In-depth interviews** with:

- traditional figures and community leaders;
- local government officials (BPBD, Social Services, Bappeda);
- recipients and managers of social assistance;
- coastal communities affected by disasters.

c. **Focus group discussions (FGD)** with the community and village/sub-district officials.

2. Secondary Data

Secondary data was obtained from:

a. national regulations (Disaster Management Law, Social Protection Law, etc.);
b. regional planning documents (RPJMD, RTRW, Contingency Plan);
c. government policy reports;
d. scientific literature, journals, books, and previous research;
e. BPS statistical data and Cirebon City BPBD reports.

2.4 Data Collection Techniques

2.4.1 Field Observation

Researchers conducted direct observations of:

a. physical conditions of coastal areas,
b. local wisdom activities relevant to environmental management,
c. social situation of social assistance recipients,
d. community response to disaster events.

Observations were conducted in a participatory manner to understand the natural dynamics of the community.

2.4.2 In-depth Interviews

Interviews were conducted in a semi-structured manner with flexible interview guidelines so that researchers could explore cultural meanings, public perceptions, and experiences related to public policy.

2.4.3 Documentation and Literature Study

Documentation is used to examine:

a. policy documents,
b. archives of traditional activities,
c. government program reports,
d. historical records of local wisdom practices.

2.5 Data Analysis Techniques

The analysis was carried out through thematic analysis (Braun & Clarke, 2006), with the following steps:

1. Data Reduction

Organizing data, grouping, and selecting relevant information related to:

a. local wisdom,
b. social policy,
c. ecological risks,
d. governance practices,
e. government–community interactions.

2. Theme Development

Interpreting data into conceptual themes, for example:

a. misalignment of formal policies with local culture,

b. local wisdom as an ecological adaptation mechanism,

c. participatory practices in disaster management.

4. Triangulation

Data validity was tested through triangulation:

a. sources (interviews, observations, documents),

b. methods (observation, interviews, FGD),

c. researchers (verification between researchers if the research is collaborative).

5. Conceptual Model Development

Data findings are synthesized within a green governance framework to build an integrative policy model, including:

a. formal recognition of local wisdom,

b. government–customary–community collaboration mechanisms,

c. indicators of green governance based on social-ecological resilience.

2.6 Validity and Credibility of Data

To ensure validity, the study implemented:

1. Methodological and source triangulation
2. Member checking – confirming interview results with the source
3. Peer debriefing – discussion with policy/environmental experts
4. Audit trail – recording the data collection and analysis process
5. Thick description – presentation of data in detail so that the context is easy to understand

2.7 Research Limitations

1. The research focuses on the context of Cirebon City so that geographical generalization is limited.
2. Data depends on the interpretation of the source, so it is prone to subjectivity.
3. Documentation of local wisdom practices is partly unwritten and therefore requires intensive verification.

III. RESULTS AND DISCUSSION

This section presents research findings on the potential of local wisdom as policy capital for strengthening disaster resilience and social policy reform in Cirebon City. Field findings are analyzed based on the theoretical framework discussed in the literature review and interpreted to develop a *green governance- based policy model* .

3.1 Ecological Risk Conditions of Cirebon City

Observations indicate that Cirebon City faces increasing ecological risks, particularly in coastal areas. Key findings include:

3.1.1 Tidal Floods and Coastal Abrasion

a. Tidal floods occur periodically in the Lemahwungkuk, Kesunean, Panjunan and Kejawanan areas.

b. Flood intensity has increased in the last five years due to sea level rise and land subsidence.

c. Abrasion causes land loss and threatens residential areas.

3.1.2 Degradation of Residential Environment

a. Low-income residential areas experience higher vulnerability.

b. Clogged drains, poor sanitation, and piling up of garbage exacerbate the impact of flooding.

3.1.3 Lack of Coastal Ecosystem Protection

a. Many mangrove areas have been damaged due to reclamation and development activities.

b. The ecological rehabilitation program has not been running consistently.

This condition shows that Cirebon's ecological risks are not only physical, but are related to aspects of governance policies and community behavior.

3.2 Local Wisdom as a Community Resilience Mechanism

Research has found that the Cirebon community possesses strong local wisdom, which serves as an instrument of ecological and social adaptation. Some prominent forms of local wisdom include:

3.2.1 Earth Alms Tradition

a. It is an annual ritual for the community to maintain harmony between humans and nature.
b. Serves to strengthen social cohesion and ecological awareness.
c. In the context of disasters, earth alms becomes a collective space to formulate community solidarity and preparedness.

3.2.2 Ngalokat Cai

a. The tradition of cleaning springs and springs by local communities.
b. Besides being symbolic, this practice has an ecological function because it maintains the sustainability of clean water sources.
c. Demonstrates how indigenous practices integrate spirituality with environmental management.

3.2.3 Mutual Cooperation

a. Used to repair houses damaged by floods, strengthen embankments, or clean water channels.
b. Be a key force in the community's rapid response to disaster events.

3.2.4 Communal Solidarity System

a. When a disaster occurs, residents help each other by providing food, accommodation and manpower.
b. This community-based social protection mechanism is faster and more adaptive than formal assistance.

This finding confirms that local wisdom has an instrumental function in increasing the socio-ecological resilience of the community.

3.3 The Disconnection Between Social Policy and Local Wisdom

Research findings indicate a mismatch between formal policies and community needs:

3.3.1 Social Policy is Distributional, Not Transformational

a. The PKH, BPNT, and BLT programs are short-term assistance.
b. Not yet building adaptive capacity or community resilience.
c. Not yet integrated with the ecological risks of coastal areas.

3.3.2 Reliance on Administrative Data

a. Determining aid recipients is often inaccurate (DTKS data is not up to date).
b. Many ecologically vulnerable groups are not registered as aid recipients.

3.3.3 Minimal Involvement of Traditional and Community Leaders

a. Local governments do not involve traditional leaders enough in social policy planning and disaster mitigation.
b. In fact, traditional figures have strong social legitimacy.

3.3.4 Technical Disaster Policy

a. Focus on emergency response, not long-term resilience.
b. Minimal integration with cultural values and community practices.

This condition strengthens the finding that Cirebon's public policy has not yet implemented the principles of *green governance* which emphasize participation, inclusivity, and ecological sustainability.

3.4 Local Wisdom as Policy Capital

This research identifies that local wisdom has the potential to be policy capital through several aspects:

3.4.1 High Social Legitimacy

Communities strongly believe in traditional values and practices, making local wisdom an ideal entry point for community-based policies.

3.4.2 Strengthening Social Cohesion

Local wisdom encourages cooperation, mutual assistance, and social solidarity networks that form the basis of community

resilience.

3.4.3 Experience-Based Ecological Knowledge

Customary practices are built on long-term ecological observations so they are adaptive and relevant to environmental conditions.

3.4.4 Community Adaptability

Local wisdom strengthens communities' rapid response to disasters, going beyond formal government intervention.

This finding is in line with the UNDRR (2019) study which confirmed that integrating local knowledge into formal policies increases community resilience.

3.5 Green Governance-Based Policy Model

Based on empirical findings and theoretical analysis, this study proposes a local wisdom-based policy model within a *green governance framework* . This model includes four main components:

3.5.1 Formal Recognition of Local Wisdom

a. Local wisdom is integrated into regional planning documents (RPJMD, RTRW, Renstra, Renkon).

b. The regional government drafted a Regional Regulation on the preservation and utilization of local wisdom for disaster mitigation.

3.5.2 Reorientation of Resilience-Based Social Policy

a. Social assistance is aimed at building the adaptive capacity of coastal communities.

b. The economic empowerment program is directed at the sustainable sector.

c. Conditional aid is linked to environmental mitigation activities.

3.5.3 Institutionalization of Government–Customary–Community Collaboration

a. Establish a communication forum between traditional leaders, government, BPBD, and community organizations.

b. Involving customary institutions in risk mapping and contingency planning.

3.5.4 Development of Community-Based Green Governance Indicators

The indicators consist of:

1. community participation in mitigation,
2. ecological sustainability,
3. revitalization of local wisdom,
4. effectiveness of social networks,
5. socio-ecological resilience.

3.6 Integration of Findings with Literature

The research findings support various theories discussed in the literature review:

a. In line with Putnam (2000), local wisdom has been proven to be social capital that increases community resilience.

b. Consistent with the concept of *green governance* (Meadowcroft, 2009), community participation is the key to sustainable governance.

c. Strengthening the results of UNDRR research (2019), local knowledge plays an important role in disaster risk reduction.

d. Strengthening Midgley's (1995) theory that social policy must be oriented towards long-term welfare, not just distribution.

I. PROPOSED CONCEPTUAL MODEL

The conceptual model proposed in this study is an integrative framework that combines local wisdom, social policy, and environmental governance within a single *green governance - based policy system* . This model is designed to strengthen disaster resilience in Cirebon City by utilizing local wisdom as policy *capital* .

This conceptual model is built from research findings and theoretical synthesis covering social capital, local knowledge, social policy, and *green governance* . Overall, this model consists of four main components , namely:
(1) Formal Recognition of Local Wisdom;

(2) Reorientation of Resilience-Based Social Policy;

(3) Government–Traditional–Community Collaboration; and

(4) Development of Community-Based *Green Governance Indicators* .

These four components are interrelated and form an operational framework that connects cultural values with regional public policy.

a. Theoretical Foundation of the Model

This model is based on four main theoretical frameworks:

1. Social Capital Theory (Putnam, Fukuyama)

Local wisdom is a form of social capital: trust, networks, and norms that support collective work.

2. Local Knowledge Theory / Indigenous Knowledge (Geertz, Keraf)

The ecological knowledge of traditional communities is the basis of community adaptation to disasters.

3. Social Policy Theory (Midgley, Titmuss)

Social policy should ideally create long-term welfare, not just distributional assistance.

4. Green Governance Framework (Meadowcroft; UNEP)

Sustainable governance must be inclusive, participatory, ecocentric, and based on local values.

The proposed conceptual model is an actual synthesis of the four theoretical frameworks.

b. Conceptual Model Structure

This model consists of four core components, each with a strategic role:

A. Component 1: Formal Recognition of Local Wisdom

Public policy must explicitly recognize and incorporate local wisdom as the basis for policy formulation. Required steps:

1. Integrating cultural values into regional planning documents , such as:
    - RPJMD
    - Regional device strategic plan
    - Contingency Plan (Renkon)
    - RTRW and RDTR
2. Drafting Regional Regulations (Perda) on the Preservation and Utilization of Local Wisdom , especially in disaster mitigation and social strengthening.
3. Standardizing certain traditional rituals as part of a risk communication strategy , such as:
    - Earth charity → soil & ecological sustainability campaign
    - Ngalokat cai → spring protection program

This formal recognition is the foundation for integrating local wisdom into policies that have so far been technocratic.

B. Component 2: Reorientation of Resilience-Based Social Policy

Social policy needs to shift from *a charity-based orientation* to *a resilience-based social policy* . This reorientation includes:

1. Social assistance is aimed at increasing the community's ability to adapt , for example:
    - disaster mitigation training,
    - ecological-based economic empowerment,
    - strengthening environmentally friendly coastal MSMEs.
2. Integration of social policy with disaster policy , such as:
    - priority assistance for residents in high-ecological risk areas,
    - labor-intensive environmental restoration program,
    - assistance according to local needs (clean water, mitigation tools).
3. Alignment of the DTKS with the Disaster Risk Map , so that aid recipients are the most ecologically vulnerable groups.
4. Family and community resilience approach as a policy focus.

C. Component 3: Government–Customary–Community Collaboration

This model emphasizes that disaster resilience cannot be built through government alone; it requires multi-stakeholder

collaboration (multi-stakeholder governance).

Proposed collaboration structure:

1. The establishment of the Disaster Resilience Collaboration Forum involves:
    - Local government (BPBD, Dinsos, Bappeda)
    - Traditional figures and cultural leaders
    - Civil society organizations
    - College
    - Coastal communities
2. Preparation of community-based risk maps , involving traditional leaders as transmitters of local knowledge.
3. Strengthening the role of traditional leaders as social mediators in:
    - dissemination of disaster information,
    - increasing public awareness,
    - post-disaster recovery.
4. Government partnership with indigenous communities in environmental rehabilitation:
    - mangrove planting
    - river and coastal cleaning
    - water conservation

This collaboration restores the role of the community as the main actor in *community-based disaster risk reduction* .

D. Component 4: Development of Community-Based Green Governance Indicators

This indicator serves to measure the success of integrating local wisdom into public policy. The indicator is formulated based on five dimensions:

1. Public Participation
    a. community involvement in disaster planning,
    b. community contribution in environmental mitigation.
2. Local Wisdom
    a. frequency and meaning of traditional rituals,
    b. contribution of cultural values in mitigation.
3. Social Resilience
    a. the power of social networks,
    b. communal solidarity during disasters.
4. Ecological Sustainability
    a. water source protection,
    b. coastal conservation,
    c. sustainability of agricultural/coastal practices.
5. Institutions
    a. inter-agency coordination,
    b. regional regulations that support local wisdom,
    c. effectiveness of government–customary collaboration forums.

c. Model Working Mechanism

The concept model works through the following stages:

a. Identification of local wisdom → mapping of values, practices, symbols, and traditional actors.
b. Integration into policy → incorporating cultural elements into strategic documents.
c. Multi-stakeholder collaboration → government–customary–community forum.

d. Program implementation → mitigation activities, resilience-oriented social assistance.

e. Monitoring based on green governance indicators → evaluation of progress and improvement.

This mechanism is cyclical and continuous.

d. Model Visualization (Textual Description)

Local wisdom

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Formal Recognition → Reorientation of Social Policy

↓ ↓

Government–Customary–Community Collaboration

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Green Governance Indicators

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Disaster Resilience & Social Policy Reform

e. Model Advantages

This model excels because:

Based on local culture → more accepted by society

Adaptive → responsive to environmental changes

Participatory → involving indigenous actors and communities

Sustainable → in line with ecological principles

Aligned with SDGs → especially SDG 13, 15, and 16

IV. CONCLUSION

This study concludes that local wisdom holds a strategic position as policy *capital* in strengthening disaster resilience and reforming social policy in Cirebon City. The research findings indicate that various community traditions and cultural practices—such as *sedekah bumi (earth almsgiving)* , ngalokat *cai (gathering)* , gotong royong (mutual cooperation), and communal solidarity systems—have strong adaptive functions against both ecological threats and social dynamics. This local wisdom forms a cohesive social network, experientially based ecological knowledge, and historically developed disaster mitigation and response mechanisms.

However, the reality is that social and disaster policies in Cirebon remain technocratic and administrative in nature, and have not been systematically integrated with the community's cultural values. Social policies emphasize aid distribution over building resilience capacity, while disaster policies tend to focus on emergency response rather than sustainable risk reduction.

To bridge this gap, this study proposes a *green governance- based policy model* that combines four main components:

(1) formal recognition of local wisdom in public policy; (2) reorientation of social policy towards a resilience-oriented model; (3) institutionalization of collaboration between the government, traditional leaders, and communities; (4) development of community-based *green governance indicators* .

This model emphasizes that the integration of local wisdom, social policy, and green governance can create more adaptive, inclusive, and sustainable policies. Thus, local wisdom serves not only as a cultural identity but also as a strategic instrument for strengthening socio-ecological resilience and supporting the achievement of the SDGs, particularly those related to climate action, terrestrial ecosystems, and strengthening local institutions.

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