



Identifying Mainstreaming Climate Change Adaptation Efforts for Children into the West Java Development Planning

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Abstract

West Java is an Indonesian Province which has a high risk of climate change impacts particularly in terms of increased exposure from many natural disasters. A natural disaster occurs frequently in the West Java Province, making the region vulnerable due to the biggest population in Indonesia it belongs to. Children are the most vulnerable population facing climate change impact because their physiological condition is not fully developed yet. They have a low adaptation ability towards the predicted changes. Therefore, mainstreaming climate change adaptation for children into development planning is important. It is also critical in order to induce more effective adaptation program. This paper analyzes how far the current development plan in the West Java Province reckons child adaptation mainstreaming to climate change. Data collection methods used in this research are the secondary method through the related development plan and the primary method through an in-depth interview to the related government institutions. Based on the analysis results using a content analysis, the region has a potential entry point to mainstream the adaptation of climate change into the development plan, involving seven government institutions. The opportunity of entry point from the West Java development plan is found in *Badan Pengelolaan Lingkungan Hidup Daerah/BPLHD* (the Regional Environmental Management Agency) work plan. However, among these institutions, it is only BPLHD and the Health Department which almost fulfill all of the institutional capacity components to mainstreaming the adaptation of climate change for children into the West Java development planning. Therefore, both institutions are potentially recommended acting for initiators to induce coordination between the seven government institutions to mainstream the adaptation of climate change for children into the West Java development planning.

Keywords: children; climate change adaptation; development planning; mainstreaming

1. Introduction

In the Fifth Assessment Report of Intergovernmental Panel on Climate Change (IPCC) it is mentioned that one of the climate change impacts is hazard events intensification. Revi (2008) also asserts that climate change potentially increases the intensity and frequency of current hazard. A hazard affected by climate change is hydro-meteorological hazards like a flood, drought, landslide, storm, sea-level rise, and vector-borne diseases. In Indonesia, West Java Province (*Provinsi Jawa Barat/Jabar*) attacked by hydro-meteorological hazards more often than others (Sagala, Krishna, & Pratama, 2015).

Among the citizens exposed to climate change impact, children are the most vulnerable group. It is because the children have a weaker physiological and psychological condition (Ahdoot & Pacheco, 2015) and lesser adaptation ability than adults (Lawler, 2011). The high-threatening climate change impact times

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with the high-vulnerable effects will increase the risk (BAPPENAS, 2009). Therefore, children have a higher risk of the climate change impact.

The climate change impact can be responded quickly through adaptation efforts against the changes (Pelling, 2011). Adaptation is the system adjustment to manage the consequences, to react the prospect of changes (Wilbanks & Kates, 2010), or to take benefit of the opportunities (Adger, Huq, Brown, Conway, & Hulme, 2003). In the IPCC (2014), it was stated that although we have done any mitigation steps, climate change cannot be avoided at a certain level. It is the consequences of historical emission and inertia of the climate system. Actually, the West Java Province Government has a mandate acting a pilot project area of climate change adaptation action written in the National Action Plan – Climate Change Adaptation. The mandate also encourages the implementation of climate change adaptation for children.

The realization of climate change adaptation can be more effective if it is mainstreamed into development planning (Alam & Bahauddin, 2013). Children in a Changing Climate Coalition (2015) also assert that mainstreaming is the most viable tools to assure the implementation of adaptation. Therefore, the aim of this research focuses on the identification of mainstreaming the climate change adaptation efforts for children into the West Java development planning.

This research used an approach adapted from UNEP (2011). The approach is used to do mainstreaming the adaptation of climate change into development planning. It consists of some stages. The first stage is an initial assessment to understand the influence of climate change for the West Java children. It has been previously studied by Sagala et al., (2015) in the research entitled “*Situation Analysis of Disaster Risk & Climate Change Impact on Children in West Java*”. Hence, this paper is a continuation of the previous research. The next stage of the UNEP approach that will be discussed in this paper is the preliminary assessments to understand the contexts of government, institution, and politics. UNEP (2011) explained that this stage is needed to find the entry point through the government institutions and development plan, and the government institutional capacity to mainstream the adaptation of climate change. Therefore, the objectives of this research cover both needs.

2. The Form of Climate Change Adaptation for Children

Many research shows that climate change adaptation for children not only see them as a vulnerable group but also an advocate to help their family, school or society in adapting to climate change (Gautam & Oswald, 2008). Meanwhile, Bartlett (2008) thinks that each of planning aspect to climate change adaptation for children needs to consider four sectors. The sectors are:

1. *Guaranteeing optimal nutrition and healthiness of children.*
Nutrition and health are the basic needs of children because it will enhance their resilience generally in adaptation condition.
2. *Reinforcing families' capability to handle.*
The families' capability is needed to cope any hardship situation and still give priority to their children.
3. *Providing, recovering and improving space for children's daily activities.*
It is important to provide a safe space for children to do their daily activities, such as doing homework, playing with their friends, etc. for keeping them safe and far from the chaotic situation.
4. *Engaging children to take active participation.*
Children and young people are potential community assets to contribute in the process of adaptation.

On the other hand, Back & Cameron (2008) has promoted six key interventions as an adaptation and mitigation strategies for children, that is:

1. Household water, sanitation, and hygiene (WASH) – including water management, oral rehydration solution (ORS), hygiene teaching, sanitation;
2. Groundwater recharge and watershed remediation – including rainwater collection, catchment areas for runoff, watershed cleanups, tree planting, biodiversity rehabilitation;
3. Disaster risk reduction and preparedness – including risk mapping, evacuation plans;
4. Health-related interference – including improving basic infrastructure of public health, environmental health supervision, nets on bed, precaution and medication of malaria;
5. Capacity building for community – including the education of children-friendly schools and environments, the development of women entrepreneurship skills, the participation of local actors;
6. Social care and psychological help – including life skills and conflict resolution, education and other programs to help livelihoods and community activation, 'safety net' interference to avoid children displacement and exploitation, and interference to undertake family and individual mental pressure.

3. Methods

This research used a qualitative descriptive approach. The descriptive research has an objective for giving a more detailed overview of an indication or phenomenon.

3.1 Data Collection Methods

The data collection method used in this study are primary and secondary methods. The secondary method is needed to obtain local regulation, governor regulation and the West Java Province planning document. All these documents will be used to help an analysis of mainstreaming entry point through the government institutions and the government policies or programs.

Meanwhile, the primary method employed an in-depth interview with the government institutions which has been identified as an entry point of mainstreaming climate change adaptation for children. Furthermore, the results of the interview will be used for analyzing the government institutional capacity in mainstreaming efforts. The questions for an interview section is adapted from the assessment of institutional capacity component to respond climate change by Wickham, Kinch, & Lal (2009), which is explained in APPENDIX 2.

3.2 Data Analysis Methods

The data analysis method in this study is qualitative content analysis. Abrahamson (1983) claimed that content analysis would be useful to test almost all of the communication material types, such as the open question of the questionnaire, interview, focus group discussion, observation.

Mayring (2014) described steps for undertaking content analysis process, that is: establishing the content analysis technique; determining the unit of analysis and establishing the category and interpretation. The content analysis technique used in this research is deductive. It means that the category is based on preceding research. There is a different category used to analyze each of the research objectives in this study.

The category for determining the suitability of the West Java government institutions to serve as the mainstreaming entry point is based on the study of Bartlett (2008) and Back & Cameron (2008). Their study explained the forms of climate change adaptation for children which can be grouped into working sectors. The working sectors group would be matched with sectors of government affairs in Law No. 23 Year 2014 about Local Government (Pemerintah Republik Indonesia, 2014). Sector classification theoretically needs to check its relevance with the sector categorization in the legal framework because it would help to find out which government institutions that responsible for handling a certain sector. The further explanation is in APPENDIX 1. Then the category to know the mainstreaming entry point through development plan is a keyword "climate change". This keyword is used to make a grouping of policies or programs or projects related to climate change in all of the reviewed documents.

Meanwhile, the category used to analyze the government institutional capacity based on the Wickham et al., (2009). Their study explained the component of institutional capacity required to respond climate change, that is:

- A. Government and Community Structure;
- B. Political Commitments;
- C. Awareness and Understanding;
- D. Lead Agency;
- E. Participation in a National Agenda;
- F. Supervisory Framework;
- G. Policies and Strategies;
- H. Coordination Procedures;
- I. Programming;
- J. Mainstreaming;
- K. Vulnerability and Capacity Assessment;
- L. Participation and Partnerships;
- M. Management of Knowledge.

This research aims to focus on mainstreaming the adaptation of climate change into development planning. So, the component used to help the institutional capacity analysis includes component A to J. The complete explanation of the variable and indicator of all components which are used in this research is in APPENDIX 2. Each component has a variable and indicator useful to the analytical process through coding. The code is made for each variable in the ten components. Then the interview answers will be grouped in accordance with the code inside the coding table to ease the interpretation.

4. Discussion

The government institutions serving for the mainstreaming entry point are analyzed with the categorization of five sectors as explained in table APPENDIX 1. Based on the categorization, there are several institutions which could represent the seven sectors to mainstream the climate change adaptation for children:

- a. Regional Development Planning Agency (*Badan Perencanaan dan Pembangunan Daerah/BAPPEDA*);
- b. Regional Environmental Management Agency (*Badan Pengelolaan Lingkungan Hidup Daerah/BPLHD*);
- c. Regional Disaster Management Agency (*Badan Penanggulangan Bencana Daerah/BPBD*);
- d. Health Department (*Dinas Kesehatan/DINKES*);
- e. Women Empowerment, Child Protection, and Family Planning Agency (*Badan Pemberdayaan Perempuan, Perlindungan Anak dan Keluarga Berencana/BP3AKB*);
- f. Social Department (*Dinas Sosial/DINSOS*); and
- g. Education Department (*Dinas Pendidikan/DISDIK*).

Afterward, the regional regulation, government regulation, and another legal framework describing the main tasks and responsibilities of these seven institutions will be reviewed. The review is used to

comprehend the suitability of each institution's duties with the five-sector category in mainstreaming the climate change adaptation for children. The result is shown in the following Table 1.

Table 1: Prospective Government Institutions Responsible for Mainstreaming Climate Change Adaptation for Children

Environment	Disaster	Health	Social, Women Empowerment and Child	Education
BAPPEDA BPLHD	BPBD BPLHD DINSOS	Dinkes	BP3AKB DINSOS BAPPEDA	DISDIK

Source: Authors Analysis, 2016

Furthermore, a number of development plans from the central and the West Java Province governments will be reviewed. Agrawala & Van Aalst (2008) assert that one of the basic steps in the entry point is identifying the best opportunities to integrate climate risk considerations into the development plan. The development plans reviewed are based on Law No. 25 Year 2004 about the National Development Planning System (Pemerintah Republik Indonesia, 2004). Table 2 shows the list of relevant development plans.

Table 2 List of Relevant Development Plans

National Level	Provincial Level	West Java Government Institutions
RPJPN 2005-2025	RPJPD 2005-2025	Strategic Plan of BAPPEDA 2008-2013
RPJMN 2004-2009	West Java's RPJMD 2008-2013	Strategic Plan of BAPPEDA 2013-2018
RPJMN 2010-2014	Intermediary RPJMD 2014	Work Plan of BAPPEDA 2013, 2014, 2015, 2016
RPJMN 2015-2019	RPJMD 2013-2018	Strategic Plan of BPLHD 2008-2013
RKP 2013	RKPD 2013	Strategic Plan of BPLHD 2013-2018
RKP 2014	RKPD 2014	Work Plan of BPLHD 2013, 2014, 2015
RKP 2015	Supplementary RKPD 2014	Provincial Disaster Management Plan 2012
RKP 2016	RKPD 2015	Strategic Plan of BP3AKB, Dinkes, Disdik 2013-2018
	RKPD 2016	Work Plan of BP3AKB, Disdik 2013, 2014, 2015, 2016

- RPJPN (Long-term National Development Plan)
- RPJMN (Medium-term National Development Plan)
- RKP (Government Work Plan)
- RPJPD (Long-term Regional Development Plan)
- RPJMD (Medium-term Regional Development Plan)
- RKPD (Local Government Work Plan)

Source: Authors Analysis, 2016

In this review, policies, programs, and projects related to climate change will be grouped. The result shows that climate change mandate is presented in all development plans at national and provincial levels. Among the West Java government institutions, however, only BAPPEDA and BPLHD which have programs or projects related to climate change in their work plan and strategic plan. Therefore, the next analysis will discuss the development plans from BAPPEDA and BPLHD.

Furthermore, the suitability of each document with the higher-level document will be reviewed, because climate change responses at all different levels should be coherent and non-contradictory in order to generate synergistic development (Juhola & Westerhoff, 2011; Laukkonen et al., 2009). Not only reviewing the development plan contained in the National Development Planning System but also the document which is specifically prepared for climate change adaptation, i.e. "National Action Plan: Climate Change Adaptation" (RAN-API), "West Java Master Plan: Climate Change Adaptation" (RI-API), and "Indonesia Climate Change Sectoral Roadmap" (ICCSR). The diagram of each document positions and its suitability with the higher level document is shown in Figure 1.

The Figure 1 shows that almost all of the West Java development plans are suitable for their reference at the national level in the climate change mandate context. The only transition is that the RPJMD 2014 is unsuitable with the climate change mandate in the RPJPD 2005-2025 as its reference document. Climate change mandate in the RPJPD 2005-2025 is about adaptation while the Intermediary RPJMD 2014 concerned with mitigation only. The coverage of mitigation agenda in these documents because of the consideration of another reference document, i.e. RPJMN 2010-2014. Actually, the Intermediary RPJMD 2014 is a temporary document before the preparation of the RPJMD 2013-2018 finished.

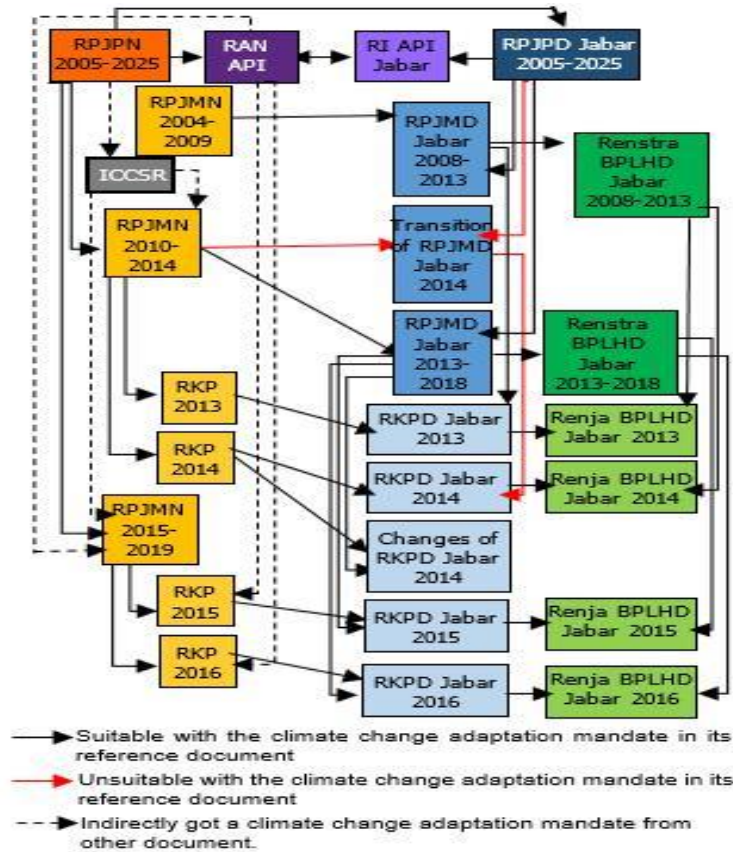


Figure 1. Relational Positions of National and Provincial Development Plans Related to Climate Change Adaptation Mandate in the West Java Province (Source: Authors Analysis, 2016)

The lack of climate change adaptation mandate in the Intermediary RPJMD 2014 does not influence the RKPD 2014. The RKPD 2014 still consists of climate change adaptation program as mandated in the RKP 2014 to which it should refer to.

The other main focus on the diagram in Figure 1 is that the RI-API of the West Java Province is actually unequal with the RAN-API. The RI-API is unsuitable with the mandate in the RAN-API which has given an instruction for the provincial government to prepare “the Regional Action Plan: Climate Change Adaptation” (RAD-API). In fact, the government did not prepare an action plan, but a master plan for climate change adaptation. However, the master plan preparation did not engage all related departments or agencies at the provincial level. Rather, it was completed by referring to a mandate from “the BPLHD Work Plan 2015”. Besides BPLHD, it was declared that the master plan was co-authored with the Centre for Climate Risk and Opportunity Management in Southeast Asia Pacific (CCROM SEAP) in Bogor Agricultural University. Hence, the RI-API document cannot be said equal to RAN API which have involved the 17 related ministries/institutions, experts from academic institutions, development partners, and non-governmental organizations.

The next analysis focused on the suitability of climate change adaptation program in “the West Java Development Plan” which has been reviewed by applying the theory of climate change adaptation for children. The theory used in this analysis was based on Bartlett (2008) who studied the four sectors important for consideration into the climate change adaptation efforts for children. The theory has been elaborated in Section 2.

Based on the RPJPN, the RPJMN, the Provincial RPJPD and the RPJMD analyzed in this research, the climate change adaptation programs in these documents are too general. There were no programs clearly mentioned the specific sectors or activities. The specific program was only found in the document plan of the BPLHD, a technical institution which got a mandate from the national and provincial governments. Then we will further analyze the program’s suitability in the BPLHD strategic plan and work plan with the Bartlett theory. Table 3 shows the suitability of climate change adaptation program for children in the West Java development plan.

Table 3. The Suitability of Climate Change Adaptation Program in the West Java Development Plan

West Java Development Plan			Climate Change Adaptation Program	Barlett (2008) Theory of Climate Change Adaptation for Children
BPLHD 2013	Work Plan		There is a regional resilience model to climate change	Step to strengthen families' capability to address climate change impact
BPLHD 2015	Work Plan		There is a regional resilience model to climate change Build one residential the model adaptable to climate change	Step to ensure optimal nutrition and healthiness for children Step to strengthen families' capability to address climate change impact
BPLHD 2013-2018	Strategic Plan		The development of climate change	Step to strengthen families' capability to address climate change impact
BPLHD 2016	Work Plan		The development of climate change adaptation model in the prone area to impacted	Step to strengthen families' capacity to cope climate change impact

Source: Authors Analysis, 2016

However, the program in those documents did not mention the children explicitly whether it has a relevance to the climate change adaptation efforts for children. For example, in the Climate Village Program, when a village or settlement resilient to climate change impacts, the children will be protected too. That is because the cooperation within communities is essential to an effective adaptation implementation in order to help children and their community survive and thrive in the face of a harsher climate (Save the Children, 2015). So it can be concluded that the development plan of BPLHD has an opportunity to be the entry point of mainstreaming climate change adaptation for children.

The seven potential West Java government institutions to become the entry point of mainstreaming climate change adaptation for children will be further analyzed in terms of their institutional capacity in mainstreaming the issues. Institutional capacity is a crucial factor which has a direct link to the success of adaptation action (Burch & Robinson, 2007) and mainstreaming process (Cuevas, Peterson, Morrison, & Robinson, 2016). The data analyzed were taken from the in-depth interview to the related staff in the seven government institutions. Then the results were analyzed with content analysis to figure out the mastery of each government institution in the institutional capacity component. Therefore, valuation with a checklist is used to show that each variable of the components has got fulfilled. The result of government's institutional capacity valuation is shown in Table 4.

Tabel 4. Government Institutional Capacity Valuation to Mainstream the Climate Change Adaptation for Children into West Java Development Planning

No	Institutional Components	Capacity	West Java Government Institutions						
			BAPPEDA	BPLHD	BPBD	BP3AKB	DINKES	DISDIK	DINSOS
1	Government and community structure	-	-	√√	√	-	√√	-	-
2	Political Commitments	-	-	√√	-	-	-	-	-
3	Awareness and Understanding	√	√	√√√	√	√	√√	√	√
4	Lead Agency	-	-	√	-	-	-	-	-
5	Participation in a National Agenda	√	√	√√	√	√	√√	√	√
6	Supervisory Framework	-	-	√	-	-	√	-	-
7	Policies and Strategies	-	-	√	-	-	√	-	-
8	Programming	-	-	√	√	.	√	-	-
9	Coordination Procedures	-	-	-	-	-	-	-	-
10	Mainstreaming	-	-	√	-	-	-	-	-

Checklist (√) shows the fulfillment of variable in the institutional capacity component

√√: All of the variable in the institutional capacity component is fulfilled

Source: Authors Analysis, 2016

The table 4 illustrates that many components of institutional capacity have not been fulfilled yet by the seven West Java government institutions. It is because most of all West Java government institutions did not have a climate change adaptation mandate from the government. The components that have been fulfilled are the awareness and understanding, and participation in the National Agenda. The only component which could not be fulfilled is coordination procedure. In fact, the coordination procedure or mechanism is required to enhancing the effectivity of information sharing (Juhola, Haanpää, & Peltonen, 2012), and collaborating across adaptation activities (Mubaya & Mafongoya, 2017; Pryor & Barthelmie, 2013). The West Java Government does not have a working group or another coordination type among the institutions related to climate change adaptation. So far, the working group concerned with climate change issues is only the Regional Action Plan – Greenhouse Gases (RAD-GRK) working group which is related to climate change mitigation.

Among the seven West Java government institutions, it is only BPLHD and DINKES which have fulfilled almost the ten institutional capacity components to the climate change adaptation mainstreaming

for children. It is because the BPLHD always appointed to act as the leading organizer to handle climate change program in most of all the West Java development plans. Hence, the BPLHD staff have a good understanding on the climate change issues. It is a substantial ability for the government institutions to take a key role in leading the climate change response (Ayers, Huq, Wright, Faisal, & Hussain, 2014; Brown, Nkem, Sonwa, & Bele, 2010; Siña et al., 2016). In addition, BPLHD also integrates the climate change adaptation into their supervisory framework, policies, strategies, and programs. Meanwhile, DINKES has got a direct mandate from the Ministry of Health through the Regulation of Health Minister No. 1018/MENKES/PER/V/2011 about the Adaptation Strategies of Health Sector to the Impact of Climate Change (Kementerian Kesehatan Republik Indonesia, 2011). A clear mandate for the compatible organizations would enhance their capacity to have a fast adaptive response, to create an effective climate change plan, and to implement the projects (Jantarasami, Lawler, & Thomas, 2010; Michel, 2014). Therefore, the supervisory framework, policies, strategies, and program components have been fulfilled by DINKES. Those components are an important instrument for doing effective adaptation and building resilience (Alhassan & Hadwen, 2017; Ayers et al., 2014; Fankhauser, Smith, & Tol, 1999).

The West Java government institutions which have not fulfilled many components of institutional capacity are BAPPEDA, BP3AKB, DISDIK, and DINSOS. They have merely fulfilled two components, that is, awareness and understanding, and participation in the National Agenda. So far BAPPEDA, the agency responsible for coordinating the West Java development, only got a direction for undertaking the climate change mitigation effort through the RAD-GRK preparation. Meanwhile, BP3AKB, DISDIK, and DINSOS have no any mandates from the governments to handle climate change issues.

5. Conclusion

The result of this study has shown that there are seven West Java government institutions which potentially to be considered as an entry point of mainstreaming climate change adaptation for children into development planning due to close relatedness of their duties and functions to the issues. Those government institutions are BAPPEDA, BPLHD, BPBD, DINKES, BP3AKB, DINSOS, and DISDIK. Not only the West Java development plan which has an opportunity to be an entry point of the climate change adaptation mainstreaming for children into the development planning, but also the BPLHD's work plan. Among the seven West Java government institutions, only BPLHD and DINKES which have fulfilled almost all of the institutional capacity components to mainstream the adaptation of climate change for children. Therefore, both government institutions are potential to be recommended as an initiator for inducing coordination among the seven government institutions to mainstream the adaptation of climate change for children into the West Java development planning.

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APPENDIX 1

Table of Categorization for Analysis of Entry Point Of Mainstreaming Climate Change Adaptation for Children Into West Java Development Planning Through Government Institutions

Based Theory	Government Affairs	Health	Environment	Serenity, Public Order, and Community Protection (Sub-Affairs: Disaster)	Social, Women Empowerment and Child Protection	Education
UNICEF (2008): Adaptation Strategies for Children		<p>Health-related interventions:</p> <ul style="list-style-type: none"> * improve basic infrastructure of public health * environmental health supervision * bednets, precaution, and medication of malaria 	<p>Household water, sanitation and hygiene [WASH] :</p> <ul style="list-style-type: none"> * water treatment * oral rehydration solution (ORS) * sanitation <p>Groundwater recharge and watershed remediation</p> <ul style="list-style-type: none"> * rainwater harvesting * runoff catchments * watershed cleanups * restoration of biodiversity 	<p>Disaster risk reduction and preparedness (risk mapping, evacuation plan)</p>	<p>Community capacity building</p> <ul style="list-style-type: none"> * micro-enterprise for women * participatory local actions <p>Social protection and psycho-social support:</p> <ul style="list-style-type: none"> * life skills and conflict resolution * education and other programs to help livelihoods and community activating * 'safety net' interference to avoid children displacement and exploitation * interference to undertake family and individual mental pressure 	<p>Community capacity building (education about child-friendly schools and spot)</p> <p>Household water, sanitation and hygiene [WASH] (hygiene education)</p>
Bartlett (2008): Climate change adaptation that takes children into account (Ensuring children's optimal health and nutrition)		<ul style="list-style-type: none"> * Nutritional programs to ensure children can withstand a crisis * Measures such as mosquito nets * Ensure adequate supplies food and drinking water * Decrease the risk of diseases which related to sanitation in camps * Services of reproductive health for young girls and women * Help for breastfeeding mothers 	<ul style="list-style-type: none"> * Guarantee that reconstructing/ upgrading is a chance to undertake environmental health issues and decrease risk commonly 	<ul style="list-style-type: none"> * Piped water, toilets and drains (with synergies to reduce disaster) * Be wary of potential hazards in post disaster circumstances * Guarantee of enough storage in houses to keep hazardous items away from children 	<ul style="list-style-type: none"> * Families develop strategies for avoiding separation, such as rendezvous points * Reconstruct in ways which make children's play and mobility with less risk 	<ul style="list-style-type: none"> * Educate children basic survival skills (like swimming in flood prone areas)
Bartlett (2008): Climate change adaptation that takes children into account (Strengthening families' capacity to cope)		<ul style="list-style-type: none"> * Support children's resilience by supporting stable, functioning adults 	<ul style="list-style-type: none"> * Housing design responsive to need for privacy 	<ul style="list-style-type: none"> * Socialization of disaster preparedness information (focus on children's well-being) * Financial incentives to manage the risk (focus on children's vulnerabilities) * Involve communities in post 	<ul style="list-style-type: none"> * Child impact assessments to follow the measures of poverty reduction * Collaboration of child-focused organizations with community development-focused agencies * Strengthening collaborative community measures rather than 	<ul style="list-style-type: none"> * Support children's resilience by supporting stable, functioning adults

Based Theory	Government Affairs	Health	Environment	Serenity, Public Order, and Community Protection (Sub-Affairs: Disaster)	Social, Women Empowerment and Child Protection	Education
				emergency planning and decision making (they determine their needs and priorities)	individualistic responses * Systematize shelter to keep family members and communities stay together * Vegetation, common space to encourage social interaction * Help children's resilience by helping stable, activating adults	
Bartlett (2008): Climate change adaptation that takes children into account (Providing, recovering and improving space for children's daily activities)			* Plant shade trees where heat stress is an issue	* Guarantee that accommodating to risks does not a substitute for adaptations * Prevent choosing schools as emergency shelters	Prepare recreational and play arena as priorities * Secure play arena for children * Keep children safe from persecution and exploitation, e.g. lighting the toilet way * Community arena which supports older children activities * Safe space for girls to socialize	* Make schools and child centres active again as soon as possible * Quiet space for children for doing homework * Bring back normally sense by recreating daily activities
Bartlett (2008): Climate change adaptation that takes children into account (Engaging children to take active participation)	* Child-to-child health approaches, e.g. assessing patterns of diarrhoeal disease * "Participation" that means real commitment of involvement * Inserting children's responses into more general planning	* Involving children in environmental monitoring and assessment * "Participation" that means real commitment of involvement * Inserting children's responses into more general planning	* Create accessible and understandable disaster-related information to children * Engage children in monitoring hazards, in disaster preparedness and risk reduction measures * Make information available and understandable to a 12-year old child * Involve young people input on issues which concern them in camps * "Participation" that means real commitment of involvement * Embedding children's responses into more general planning	* "Participation" that means real commitment to involvement * Embedding children's responses into more general planning	* Help children with active stewardship by training and education * Giving children a genuine say concerning their own priorities * "Participation" that means real commitment to involvement * Embedding children's responses into more general planning	

Source: Authors Analysis, 2016

APPENDIX 2

Table of Component, Variable, And Indicator of Institutional Capacity to Mainstream Climate Change Adaptation for Children

No	Component	Variable	Indicator
1.	Government and community structure	Relation between government across all levels to handle the climate change adaptation for children	There are a good relation and coordination between government and local government to handle climate change adaptation for children
		Relation between government and community to deliver the information or complainant about climate change adaptation for children	People are easy to get information and give a complaint about climate change adaptation for children
		Community responds to the development plan that concerned with climate change adaptation for children	People give a good response and support the development planning that concerned with climate change adaptation for children
		Government support to community project that concerned with climate change adaptation for children	Government gives a full support to community project that concerned with climate change adaptation for children
2.	Political Commitments	Political agenda that concerned with climate change adaptation for children in the Province Development Plan Agenda	There is a mandate about climate change adaptation for children in the Province Development Plan Agenda
		Political agenda in a budget allocation that specific for climate change adaptation for children	There is a specific budget allocation to handle climate change adaptation for children
3.	Awareness and Understanding	Understanding of government institutions about climate change adaptation for children	Government institutions have an understanding about climate change adaptation for children
		Communication strategy in the internal government institutions to coordinate the climate change adaptation efforts for children	There is a specific discussion in the internal government institutions to coordinate the climate change adaptation efforts for children
		Capacity building for government institution staff about climate change adaptation for children	There is a staff capacity building about climate change adaptation for children in each of related government institutions
4.	Lead Agency	Lead agency that has a specific legal mandate to handle climate change issues	There is a lead agency in province level that devolved a specific authority to handle climate change issues
5.	Participation in a National Agenda	Participation of government institutions in the national conference or meeting about climate change and children issues	High participation of government institutions in the national conference or meeting about climate change and children issues
6.	Supervisory Framework	Supervisory framework that used to formulate the climate change adaptation efforts for children	There is a regulatory framework that used as a base to formulate the climate change adaptation efforts for children
7.	Policies and Strategies	Policies and strategies of climate change adaptation for children	There are policies and strategies about climate change adaptation for children
8.	Coordination Procedures	Coordination among government institutions to handle climate change adaptation for children	There is a mandate for some government institutions to handle climate change adaptation for children
9.	Programming	Programs about climate change adaptation for children	There is a program about climate change adaptation for children
		Participation of stakeholder in a community level into government program that related to climate change adaptation for children	There is a participation of stakeholder in a community level into government program that related to climate change adaptation for children
10	Mainstreaming	Awareness and understanding of related government institutions to mainstream the climate change adaptation for children into development planning	Climate change adaptation for children has been mainstreamed into province development plan because of the awareness and understanding which is owned by government institutions

Source: Authors Analysis, 2016