

[Building Adaptation Capacity Local Authorities in Korea]

Local Adaptation Planning Procedure and Consulting Programs

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- There are definite evidence of climate change and its impacts in every related sector in Korea
 - Temperature increase of 6 major cities are 1.7°C in 100yr
 - Annual precipitation of 6 major cities are 19% increase in 100yr
 - Rainfall intensity is doubled than 1970s
 - Sea level rise about 8cm in the past 43yr
- Estimates on the impact costs of climate change is about KRW 800 in 2100yr (KEI, 2009) * trillion(1US dollar=1,150 KRW)
- In 2010, Korea established the National Adaptation Strategy and Framework Act on Low Carbon, Green Growth and started to cooperate and communicate with local governments in adaption
- In 2011, local governments started establish their own adaptation plan and now they are in progress

Definition of Local Adaptation Plan is

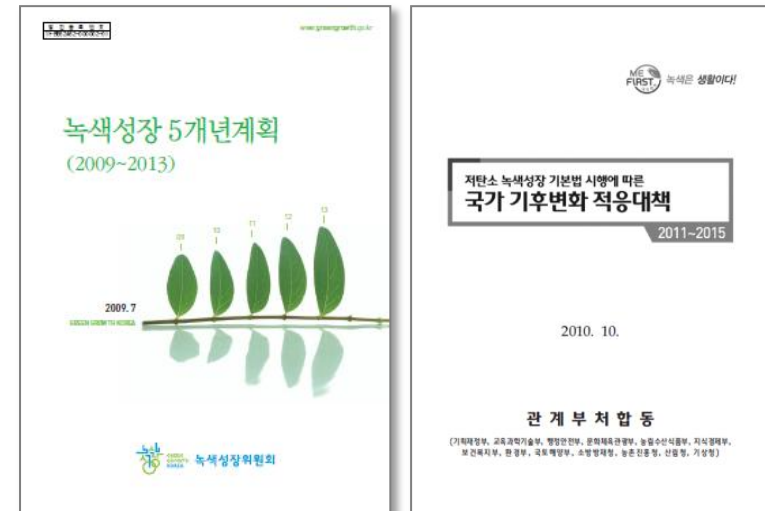
a practical and proactive plan in order to help local governments improve their resiliency to climate change impact

- Objectives of LAP is....
 - ✓ Strategies for adapting in changing climate for local governments with considering their own situation
 - ✓ Actions for practical implementation
 - ✓ Chains for linking national adaptation strategies with local level
 - ✓ Process for building adaptation capacity
 - ✓ Measures for developing adaptation awareness and involving various stakeholders

II. Framework for CCA in Korea

1. Adaptation Policy

- Framework Act on Low Carbon, Green Growth and enforcement ordinance enters into effect on April 14, 2010
- Plans that directly related to CCA are Green Growth Five-year Action Plan, Basic Plan for Coping with Climate Change, National Climate CCA Master Plan



[law]

Framework Act on Low Carbon, Green Growth (April, 2010)

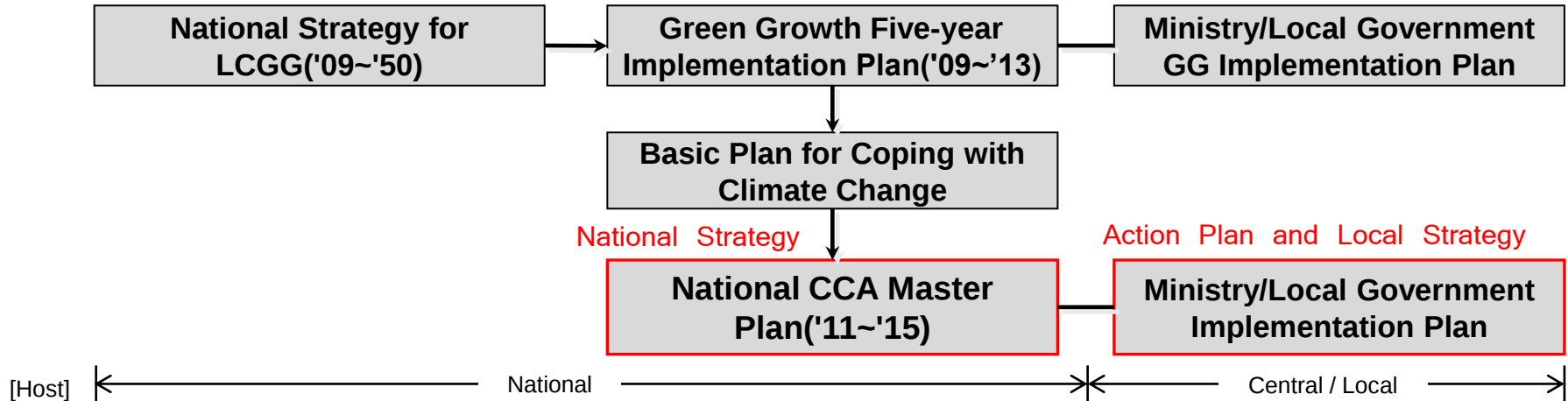


Fig. Climate Change Adaptation Policy Framework in Korea (KEI, 2010)

- Introduce Top-down Approach to cope with Climate Change
 - Korea composed a National government adaptation committee with 13 ministries to implement the National Adaptation Strategy
 - Ministry of Environment(MOE) is in charge of the NAS and supporting local governments
- Build up Ground for Adaptation : Policy and Budget
 - In August, 2010, Korea has established the National Climate Change Adaptation Master Plan by Framework Act on Low Carbon, Green Growth and set up the committee to implement the NCCAMP successfully
 - In 2011, MOE allocated about 4billion(USD) in supporting local government adaptation plan
- Establish a National Task Force Center for Adaptation
 - MOE launched a national task force for climate change adaptation , Korea Adaptation Center for Climate Change(KACCC) in 1st July 2009 at KEI
 - MOE and KACCC are working closely to support successful local adaptation plan

Central government launched supporting programs for LAP with KACCC in 2010

- Systematic and various supporting programs that helps local governments to enhance their adaptation knowledge and build adaptation capacity
- Supporting programs are divided into 3 categories and now is in 2nd phase

	Guiding & Consulting	Informing	Communicating
	To help local governments prepare for climate change by recommending easy-to understand preparedness based on resources, tools, examples and communication		
Phase 1 (2010)	• LAP Guideline • LAP Pilot studies	• Inventory of adaptation policy options (national)	• Workshops, seminars • Online community : website
Phase 2 (2011)	• LAP Consultation • Impact and risk assessment manual for adaptation	• Climate change projection • Risk assessment • Updating inventory (local and other nations)	• Workshops, seminars, expert forum • Online community : website

Fig. Supporting programs for LAP by National government

Two-pilot projects, showing what is LAP

- Example of adaptation planning in local level
 - Seoul metropolitan city Adaptation Plan - Health and Hazards
 - Incheon metropolis – Coastal and Sea
- To develop a adaptation planning guideline for local governments

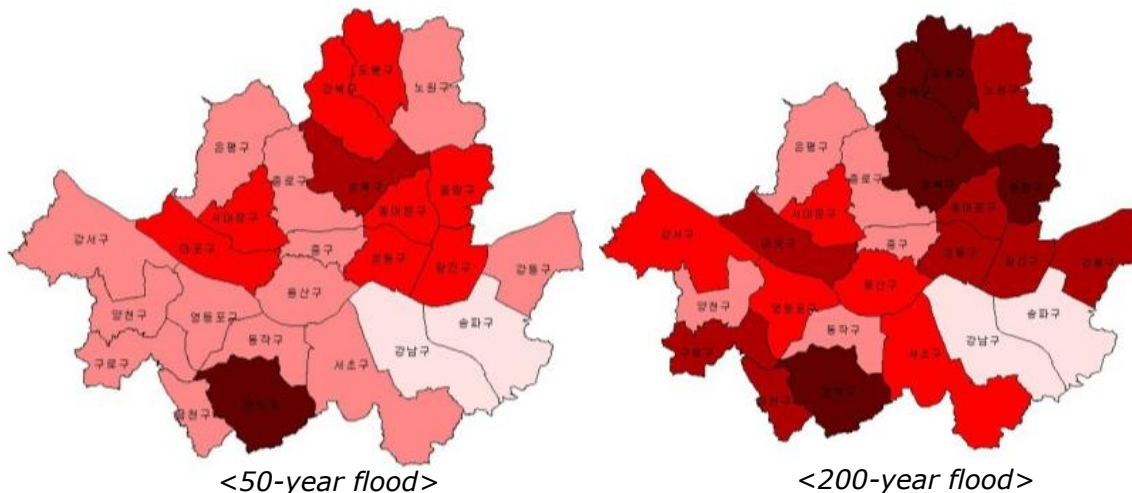
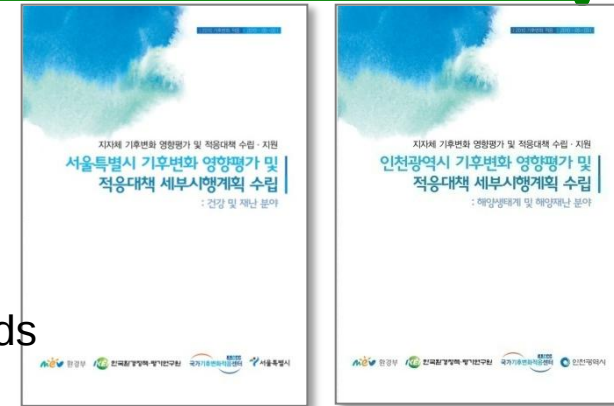


Fig. 50-year 200-year Flood Vulnerability Map in Seoul

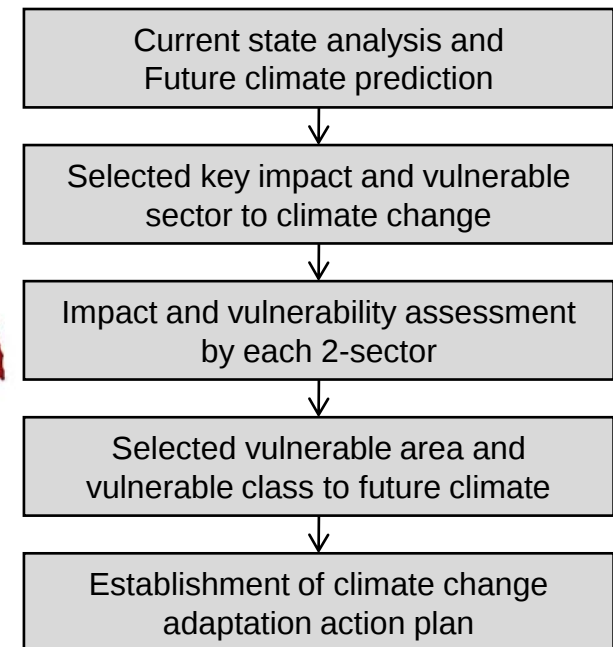


Fig. Process of Adaptation Plan in Local Level

Guideline for developing LAP

- By updating 2009 guideline with experience of 2 pilot studies, local authorities can establish more realistic and efficient adaptation plan
- Guidebook begins with introduction(ch1), LAP related concepts and definitions (ch2&3), LAP process and methods(ch4), each sector planning methods(ch5)

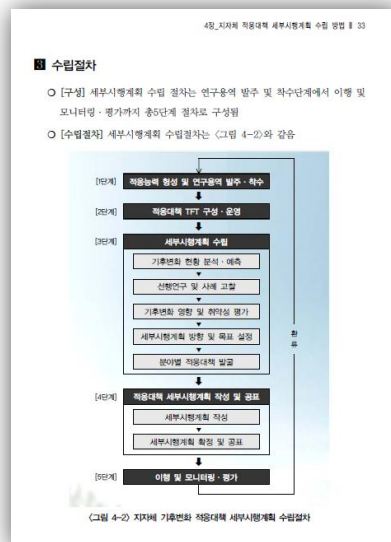
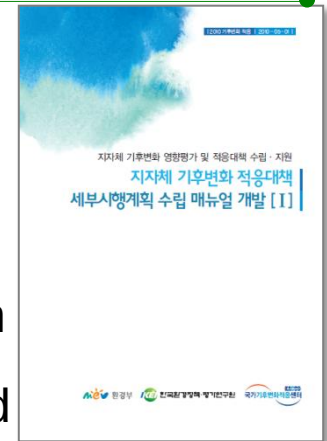


Fig. 2010 LAP guideline

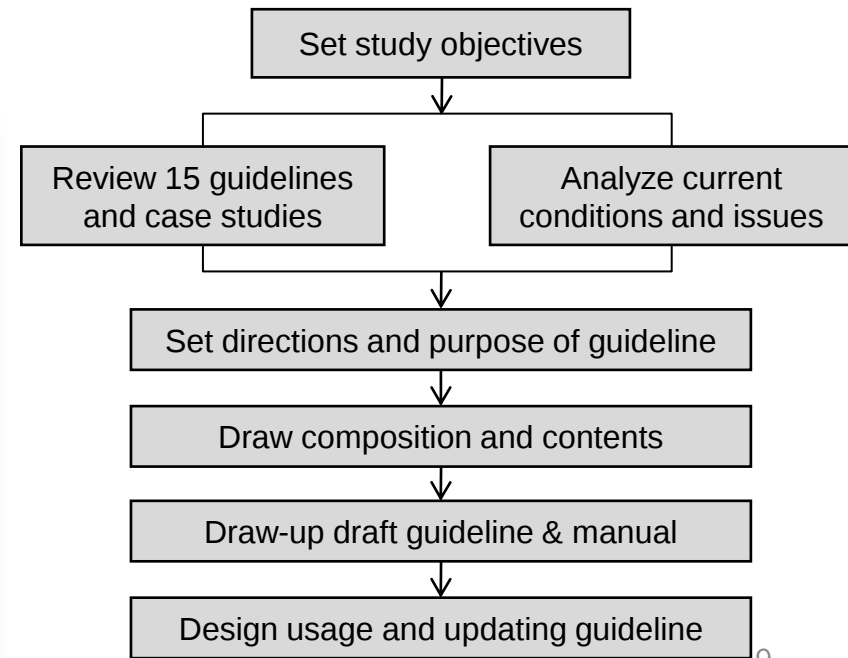
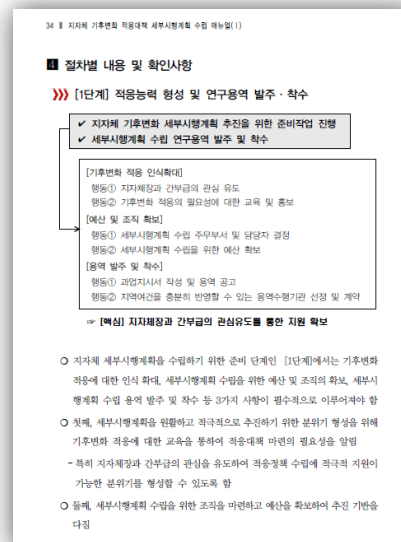


Fig. Process of Developing LAP Guideline 2010

Sharing adaptation knowledge and communicating with stakeholders

- Hold meetings, workshops, seminars to share knowledge, know-how with experts, national/local governors and citizens
 - Share knowledge from who already experienced LAP
 - Find issues in preparing and planning LAP by communicating with local governments with national
- Bring out adaptation issues by publishing news letters



National government draw picture of how to manage LAP

- Under National Adaptation Strategy MOE is in charge of leading LAP with local government
- Local government promoted LAP with national government(MOE) and related organizations
- Korea Meteorological Administration(KMA), National Institute of Environmental Research(NIER), Korea Adaptation Center for Climate Change(KACCC)

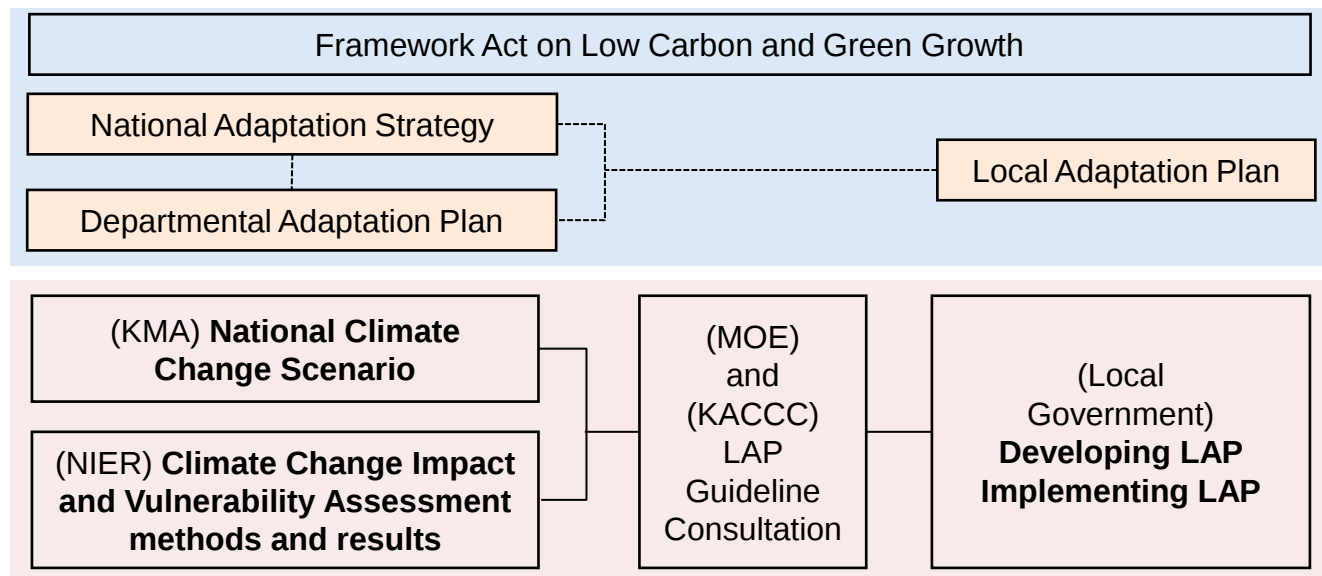


Fig. LAP system in Korea and related organizations

There are 5 principles in developing LAP

- Integration of Policy
 - Adaptation is based on various sectors therefore locals should consider the linkage between related sectors
 - Adaptation policy is not a new one so locals should firstly find-out what adaptation policy they have nowadays
- Double-sidedness of Climate Change
 - Impacts of climate change has both negative and positive sides
- Participation of Stakeholders
 - Adaptation is related to various sectors stakeholders therefore communicating with stakeholders while developing LAP directly connected to successful implementation of LAP
- Focusing on Local Issues
- Feedback mechanism of Adaptation Planning
 - Locals should aware uncertainty of climate change therefore monitoring and assessment must be take account into adaptation plan

LAP Guidebook suggests 5 step LAP development procedure and operates feedback system that lowers uncertainty of climate change

- Step 1 : Prepare the Ground and Order Research Project
 - Attract mayors interest
 - Find the best institute who knows the regional issues well
- Step 2 : Build Task Force Team for LAP
 - Consist of officials and stakeholders act as an advisory group
- Step 3 : Develop LAP
 - Analyze climate change from past to present and Predict future climate change
 - Review previous studies and gather related information
 - Assess impact and vulnerability of the region
 - Set the strategic direction and goals
 - Plan adaptation options
- Step 4 : Publish and Notify LAP
 - Set draft LAP
 - Public hearing and communicating with stakeholders
- Step 5 : Implement LAP with Monitoring and Assessment

LAP diagnosis current status and predict future situation and contains appropriate solutions for locals to adapt in changing climate

- Identify planning areas relevant to climate change
- Scientific overview of climate change and its impacts
- Survey recognition and overall conditions for adaptation
- Scope the climate change impacts to local major sectors
- A climate change vulnerability assessment
- Overall strategic direction and sector goals
- Potential adaptation actions and prioritize actions by sector

KACCC launched advisory group to support developing LAP and promote local authorities to build their adaptation capacity

- While advisory groups progress consulting they should keep in mind that...
 - ✓ Consider LAP purpose
 - ✓ Consider local's own situation
 - ✓ Consider subjects are professional or not, and accurate or not
 - ✓ Consider the connectivity of each adaptation sector
 - ✓ Consider the linkage between LAP with national adaptation strategy
 - ✓ Consider feasibility of LAP

40 specialists in each 10 sector, a wide range of adaptation sector, are in advisory group

- Specialists in various adaptation sector are participated in LAP Advisory group
- Advisory group specialists are in academic, business area in each 10 sector
 - Sector divides into health, disaster, agriculture, forestry, marine and fisheries, water, ecology, climate, industry and energy, education and public relations, as same as national adaptation strategy sector specific
- Advisory group consults local authorities and planning organizations by
 - ✓ Holding teleconference, workshops, written paper and direct visiting
 - ✓ Cooperating with related internal, international, intergovernmental organizations and NGOs
 - ✓ Publishing guidelines and supply related information



Consulting steps are closely linked with LAP procedure

- Step 1 : Prepare the Ground
 - Organize advisory group and set-up objectives, direction, systems etc.
- Step 2 : Guiding overall adaptation planning procedure and methods
 - Related concepts and definitions
 - Overall LAP procedures and systems
- Step 3 : Carry out sector specific / step-by step advise
 - Climate analysis and prediction
 - Impact and vulnerability assessment
 - adaptation options
- Step 4 : Synthesize monitoring results and assess LAP
- Overall Step : Monitoring

V. Next Steps for Adapting in Changing Climate

- Local authorities are still in progress of developing their own adaptation plan
 - Vulnerability assessment results provided in September, 2011
 - Every 16 locals host interim report in October and November
- 1st adaptation plan in local level will be finished in February, 2012 and after this local governments are going to start implementing adaption programs
- Consultation on developing LAP would be changed into supporting local authorities to implement their adaptation programs
- KACCC supporting program is in phase 3 when 2012
 - Update guidebook with using LAP results
 - Operate online information sharing system(adaptation policy inventory tool kit)
 - Monitoring progress of LAP and assessing LAP