Urban Climate Change Adaptation and Resilience

Module 5: Evaluating Strategies for Reducing Vulnerability and Mainstreaming Resilience
This is the general title slide for all of the modules. **Facilitator:** Make sure to change the date so that it is correct.
Facilitator: make sure to change the date on the slide so that it is accurate.

This module has 3 parts. In the first part of the module focuses on developing criteria for evaluating the resilience and adaptation options that were developed in the previous module.

The second part of the module focuses on how to apply the criteria.

The last part of the module addresses mainstreaming of resilience and climate change adaptation into everyday processes of governance. **NOTE THAT THE MAINSTREAMING MATERIAL HAS NEVER BEEN TESTED.** In both the Philippines and Indonesia pilot test runs there was not enough time to complete this material. Moreover, in both cases the facilitation team, in consultation with the development team, decided that this material was not central to the mission of the training course and therefore could be omitted. It is included here for reference purposes only.

Expected time: 3–4 Hours. This module should commence during the morning of the 4th day of a 4-day training week.

The **learning objectives** for this module are:

- Identify criteria likely to be used in evaluating and setting priorities among climate
adaptation strategies

- Describe techniques that groups of experts, citizens, public officials, and others can use to apply evaluative criteria to assess strategies that have been identified
- Identify different types of costs and cost-assessment procedures that may be relevant to the evaluation of urban climate adaptation strategies
Last Time We Discussed…

- **Threats, Exposure, Sensitivity, Impacts, Adaptive (or Coping) Capacity, and Vulnerability**
  - A methodology for conducting a **Vulnerability Assessment**

- **Primary vulnerabilities in your city/district**

- **Utilizing principles of resilience to develop strategies for decreasing vulnerability**

**Last time.** With this slide the facilitator should briefly review the material and activities from the previous module to build a bridge to the current module. The facilitator may choose whatever technique is deemed appropriate for reviewing material from the previous modules, but it is important to create some sort of bridge between module #4 and the current module.

An important point to make is that in the last activity in Module 4 all of the participants worked together to develop a sample list of resilience and adaptation strategies. Point to the list and **ASK** the participants to reflect on the types of considerations that went into developing the list. In an interactive way go back through the procedure, discussing each of the steps.

--**ASK** the participants to describe some of the most pertinent threats to their municipality or region.

--**ASK** the participants to provide the “formula” for vulnerability.

--**Write** it on the white board or flip chart (Exposure x Sensitivity = Impacts; Impacts divided by Adaptive Capacity = Vulnerability.

--**REITERATE** the importance of *meaningful participation and consultation* in every step of the process. Remind the participants that there are many resources and toolkits available that can guide them through the vulnerability assessment process, virtually all of them are structured based on this formulation of identifying and characterizing threats, exposure, sensitivity, impacts, and adaptive (or coping) capacity resulting in a certain level of relative vulnerability to climate and disaster risks (for lack of another, better term).
The facilitator should highlight each of these points individually and should encourage discussion of each point before moving on to the next point.

The first part of this module focuses on developing criteria to evaluate all of the options you have generated for increasing adaptive capacity, decreasing exposure, and decreasing sensitivity. Since each situation is different, developing effective evaluative criteria is an essential part of the adaptation and resilience building process.

In the second part of the module we will address several different methods and tools for applying the criteria that you develop. We will bear in mind several of the underlying themes of this course: transparency, accountability, and participation, which will help to ensure the overall, long-term success and sustainability of the adaptation and resilience building process.

And lastly, we will spend some time discussing some key principles of mainstreaming resilience and adaptation into everyday processes of governance. As we mentioned in module 1, resilience building and increasing adaptive capacity should not be seen as an additional task for government, but rather as a way of providing improved decision support.
Now that we have developed a list of potential options, we need to begin the process of figuring out which ones are most appropriate for our context. Application metrics or criteria are a system of measurement of the selection and evaluation of adaptation strategies. Criteria are in some cases referred to as “design specifications”. The application of metrics is very important when measuring the need for and effectiveness of adaptation actions. Metrics and criteria provide a way to compare the effectiveness of options including cost and can be used to help establish priorities among adaptation options.

Basically here you are determining what you point for defining criteria on any project. In this section we’ll go over how to develop evaluative want your option to do, and how well do you want it to do it. Design consideration should serve as the starting criteria.
Here is where we are in the overall “project cycle”. The first two modules in fact both focus on evaluating options. However, this course treats “establishing criteria to evaluate options” separately from “applying criteria” because these two processes require careful consideration of a range of factors.
Facilitator: This is an introductory, ice breaker activity. Ask the participants, in plenary, the following:

Imagine the process of buying a car. How do you make a decision about buying a car? What sorts of criteria do you use?

Facilitator: Use the flip chart, and record the answers. Encourage discussion about the criteria that are used for evaluating automobiles. Which criteria is most important? Who is involved in determining criteria that will be used? Should the same types of criteria be used for all purchases? Or should different goods or services be evaluated with different criteria?

This is a picture of a car modified by Affandi, a famous Javanese artist. The car is located in the Affandi Museum in Jogjakarta, Indonesia.
There are all sorts of criteria for helping to choose between multiple options.

Effectiveness is perhaps one of the most important criteria, and is used in virtually all circumstances. Effectiveness is a measure of how completely the option is able to satisfy the requirements for which the option has been developed.

Cost refers to a number of considerations that will be discussed in a few moments.

Technical feasibility attempts to determine whether the implementation team or the municipality has the capabilities to implement the strategy in question effectively and efficiently, whereas ease of implementation can be a consideration of time, political will, and other factors that are relevant in implementation. **Facilitator:** Make sure to emphasize the political will aspect of “ease of implementation” and encourage a discussion on this issue.

“Co-benefits” refers to strategies that achieve or advance other priorities in addition to climate change adaptation. Experience and research indicates that co-benefits are among the most important determinants for successful adaptation programs. Strategies that are able to incorporate or harmonize with other development priorities are far more likely to be success and sustainable and to gain political and popular support than those that don’t.
The situation here is that about 300,000 families in Jakarta live in illegal settlements just like the one in the picture in the slide. In Jakarta these people are among the most vulnerable to flooding and sea-level rise. There are also ripple-effects and indirect impacts resulting from their exposure and sensitivity. **ASK** what some of these ripple impacts might be. Health concerns should come up.

**Ask** the participants what solutions might be proposed for a situation like this. For example, one common solution is **relocation** of the illegal residents. However, relocation is easier said than done. In many cases relocation (or similar solutions) might seem like a good idea on paper, but in reality the issue turns out to be very complicated. A discussion of this reality will help the facilitator underscore the importance of developing effective criteria. Some of the participants might be aware of the difficulties that have experienced in attempting to implement relocation in Jakarta.

Then **ASK** the participants to consider what criteria they might apply to evaluating projects to address this situation. Allow the participants to think for a few minutes and discuss. Solicit input and use the flip chart. If the following do not come up, **prompt** the participants with these points:
--Would **effectiveness** be an important criteria? What aspects of effectiveness would you consider important, and how would you measure effectiveness? Provide some examples.

--What aspects of **feasibility** would be important to apply to this situation? How would you apply them. For example, would you consider **time to implement** to be an important criteria? And how would you judge it? What types of **costs** might be important to consider?

--Would **acceptability** or **suitability** be an important criteria in this instance? How would you articulate these considerations as succinct criteria to judge potential options. For example, if **forced eviction** was one of the potential options, how would you judge the acceptability of that option?

--Would possible **co-benefits** be an important criteria in this situation? For example, would it be important for the potential policy options to contribute to other goals, such as **poverty alleviation**, **increased educational opportunities**, or **improving health indicators**?

Photo from Al Jazeera. Source: http://www.aljazeera.com/indepth/features/2013/01/20131306461717780.html
One of the first steps in establishing criteria for ranking options is to determine the degree to which each option will address the problem in question.

One simple way to rank the options in terms of effectiveness would be to subjectively determine their effectiveness. To facilitate this process you might ask the following questions: Will the action eliminate the impact (will the adaptation achieve the state objective)? If not how much will it reduce the impact? Will it take some time to become effective? How long will it be effective? How efficiently are the outputs achieved relative to the resources allocated? The basic comparison is vulnerability without the adaptation vs. vulnerability with the adaptation…

More complex approaches might involve modelling studies.

**Facilitator:** Emphasize that there are numerous ways for evaluating effectiveness, and tools and strategies are available online.

Graphic from CAM framework documents (2013).
We are going to take a moment to think about costs, because there are lots of different types of costs and sometimes they aren’t obvious.

The first type of costs we’re most familiar with. These are direct costs, budget money that is used for project development, purchasing, installation, etc. For example, direct costs associated with setting up a new computer network in a government office would include purchasing hardware, software, training, installation, etc. Direct costs refer to the things you have to buy to get your project going. These are relatively easy to estimate, and most city planning officials have plenty of experience in estimating direct costs.

Indirect costs, on the other hand, are those that are not directly accountable to a particular project, facility, function, or product. These include administrative overhead, personnel, and security costs.

Ongoing costs refers to expenses that recur, like maintenance and repair. It is often difficult to estimate ongoing costs in an atmosphere of uncertainty.

Opportunity costs refer to the value of what you give up or forego when you
make a choice. For example, a young person that chooses to go to university instead of entering the workforce forgoes all of the income that would be earned working while that young person is going to school.

**Discount rate and timespan over which time both costs and benefits are calculated** refers to how much you ‘discount’ future benefits to immediate benefits (a ‘little’ or a ‘lot’?), and over what span of time you calculate both costs and benefits (10, 20, or 50 years). These are both very important factors to consider in structuring your analysis, but answering them is beyond the scope of this Module and training course. However, in most cases, the longer you estimate the costs and/or benefits to extend into the future, the lower the discount rate should be (say 1 – 5%).
Feasibility is among the most important criteria because it is an indicator of the extent to which an option can actually be accomplished. The existence of limiting factors for implementation and sustainability, such as lacking legal, financial, technical, and institutional resources all impinge on the feasibility of a particular option. There are several factors to consider when assessing feasibility, including:

- Technical complexity and demands
- Time to implement
- Capacity of local communities
- Capacity of local government
- Level of coordination

Feasibility is among the most important criteria because it is an indicator of the extent to which an option can actually be accomplished. The existence of limiting factors for implementation and sustainability, such as lacking legal, financial, technical, and institutional resources all impinge on the feasibility of a particular option. There are several factors to consider when assessing feasibility, including:

Technical complexity and demands. Does the affected community or lead government agency have the knowledge and skills to use the technologies involved? Is the technology available within the country? Another key consideration in terms of technical complexity is how much expertise is involved to implement the option. Ask the participants how you might develop a criteria that addresses this issue.

--For example, in Kiribati, representatives from the various islands that were included in the policy evaluation process rated each of the options and classified them into four categories: A: Urgent options that could be done by the communities themselves; B: Urgent options for which communities needed assistance from the government; C: Options that were less important/urgent; and D: options for which there was no need or willingness to implement. Category B options were then assigned to the responsible ministries. Ask the participants to discuss this approach and comment on whether it makes
sense or could be applicable in their context. Is the degree of “decentralizability” or the potential to “delegate” responsibility for implementation an important criteria? How would you gauge it?

**Time to implement** …In some situations action is required now; in others there are longer time horizons. Your team will need to assess whether it is possible to accomplish the proposed project or policy in a suitable timeframe. What is the time required to implement the project? Can it be implemented immediately or does it require long surveys and design time?

**Capacities of local communities**: if the project or policy involves local communities in any way, then the characteristics of the local community will need to be taken into consideration. This includes questions about leadership within the community and who take on the responsibility for the project.

**Capacity of local government**. Even though resilience building is a participatory process, the backbone of building resilience is the city government. When thinking about the feasibility of a potential project or policy, you should take into consideration whether the local government has the capacity to manage, monitor, repair, evaluate, and implement. You should also consider variables such as political support and formal and informal relationships of power and influence, as these are often key considerations at the municipal level.

**Costs**. This is more complex than it might seem at first. Certainly a key question is whether the financial resources exist to get the job done. However there are other types of costs aside from direct costs. These are the subject of the next slide.
### Other Evaluative Criteria

- **Public and Political Acceptability**
- **Distribution of costs & benefits** ("winners vs. losers")
- **Robustness and Durability**
- **Flexibility**
- **Co-Benefits**
- **Possibility of Maladaptation**

**Legitimacy/acceptability** refers to whether the option is politically, culturally, and socially acceptable. When considering acceptability, your task force should think about whether there exist barriers to implementation as well as the possible need to adjust other policies to accommodate the adaptation option. The question of acceptability also entails stakeholder support.

**Distribution of costs and benefits.** We discussed this in a previous module when we covered maladaptation. In order to be sustainable, resilience building must be perceived as treating stakeholders fairly, and measures should not disproportionately burden any one particularly group, if that outcome can be avoided.

**Robustness** is whether the option is useful under a range of future climate projections and situations. If a strategy will be beneficial across a range of different “futures”, then it can considered to be robust.

**Flexibility**….does the option allow for adjustment and incremental implementation and reiteration depending on the level and degree of climate change. Another key aspect of flexibility is that regulations and standards that are implemented shouldn’t lock adaptation into past climate but rather should
encourage the recognition of changing climate trends and incorporation of projected change in climate. Thus projects and policies that can be regularly updated given new information would score high on a flexibility criteria.

**Co-benefits**….this is an important issue are can be something of a challenge to operationalize. Key questions might include: does the option reinforce and aid with other important policy objectives? Will it further the implementation of other desired policies? An example would be land management practice (such as afforestation or the establishment of biopores) that lead to reduced erosion/siltation and increased carbon sequestration.

--An example of this comes from Rwanda. There, one of the criteria used to prioritize the adaptation of options was the contribution of that option to sustainability. Moreover, for each high-priority project selected in Rwanda, links between the objectives of the project and key national development strategies (including Rwanda Vision 2020 and the Rwanda PRSP) were provided.

--Co benefits also refers to things like job creation, benefits to the economy through energy or water efficiency, or the development of a malaria program, for example.

**Maladaptation.** Is the option maladaptive in any way? Does it lock in outcomes and limit future adaptation option, or adversely impact on other areas or people? Does the strategy have negative impacts on the environment? Some experts working on climate change adaptation suggest that the potential for maladaptation should be considered one of the most important criteria for evaluating potential strategies.
Your criteria should be based on as much data and information as possible. This information comes not only from those stakeholders involved in developing the criteria, but from city records, demographic information, socio-economic information, geographic/geological information, etc. Moreover, it is often helpful to look at other studies that have been done elsewhere for hints in how to establish effective evaluative criteria. This is one of the ways that learning networks and collaboration/cooperation with other cities and regions is most obviously useful. Cities and regions can support one another by sharing information and experience.

**ASK** the participants to identify sources of information for evaluative criteria.
The situation here is that hundreds of homes and businesses have been built close to the shore in Hawai‘i due to relatively weak zoning regulations concerning buildings. In the past year approximately 10 homes were directly threatened by abnormally high waves. Projections suggest that this problem will become worse in coming years. However, the land and houses have a high market value given the location close to the beach, and many of the owners expect their investment to be protected.

Ask what sorts of potential options might be considered for this problem. Possible options would include relocation, sea walls, beach nourishment, armoring. Is the potential for Maladaptation high in a situation like this in your town or city?

Ask what criteria would be important to consider in this situation, and how would you measure the criteria.

Photo is of the North Shore of Hawai‘i. Source: http://www.huffingtonpost.com/2014/01/03/hawaii-eroding-coastline_n_4537537.html
Facilitator: These questions are meant to be the focus of a group workshop activity. The questions should be applied to the options generated for the Valenzuela exercise, or for the locally-focused exercise.

After the groups have discussed for 20 minutes, conduct a debrief among all participants in which at least two groups present their evaluative criteria.
This is the next step in the process. Once you have developed a list of criteria, you will then use the criteria to rank the potential options. However, this process is not as straightforward as it might seem, since it entails making judgments. Values, agendas, and policy orientations can all come into play when applying criteria, and so it is important to have a transparent and effective process for reaching consensus. This section focuses on decision tools that are useful for applying criteria.
Here is where we are in the overall “project cycle”. The first two modules in fact both focus on evaluating options. However, this course treats “establishing criteria to evaluate options” separately from “applying criteria” because these two processes require careful consideration of a range of factors.
The task of applying criteria involves finding meaningful ways to compare options so that we can identify those options that provide maximal social and economic benefits. This matrix provides a simple illustration of how to display the evaluation of options. In practice, it may be necessary to give some criteria greater weight. It may also be necessary to provide much greater specificity in the measurement of effectiveness, costs, etc.

This is a completed matrix for evaluating adaptation options to cope with potential water shortages in Polokwane, South Africa. Source is USAID 2007: Adapting to Climate Variability and Change: A Guidance Manual for Development Planning p24.

This completed matrix is an example of evaluative criteria that have been applied effectively. However, the criteria have evidently not been weighted. Looking at this how would you convert this to information that would facilitate choosing among options?
Some analysis of activities or options may occur in a Shared Learning Dialogue or community advisory group. The decision processes listed here are simple tools to help non-professional groups have structured conversations about options in ways that may lead to recommendations about “best” or “most favored” options.

One commonly used method is the Goeller Scorecard, which is a matrix that is used to select among alternatives. It is a very clear and easy to follow method that allows for a high level of participation and is easy to communicate to all stakeholders. The Goeller scorecard also allows users to highlight the best and worst options for each criteria.

Sometimes these decision processes are meant to be advisory to a government agency or an NGO that plans to invest in climate resilience-building activities.
In the Goeller scorecard, options are compared in “natural units” such as cost, time, duration of effective use, etc.

1. Options are displayed in columns, criteria in rows
2. Impacts of each option are described in “natural” units: beach nourishment costs, costs of building protection wall, duration of potential effectiveness, etc.
3. What is known about the impact of each option is shown in each cell of the matrix in numerical or written form.
4. An analyst or decision maker can assign weights to criteria as they see fit.

In this example of addressing coastal erosion at a specific site, only three criteria---effectiveness, costs and resiliency---are displayed. A brief snapshot of the implications of each criterion for each of three options is show just to illustrate the tool. In a real example, more criteria and more information would be provided. The costs in this example are hypothetical. The Goeller scorecard can be an effective way to inform community groups and other non-specialists about the application of criteria to specific options.
In the goal achievement matrix, the group works to determine how effectively each option or activity meets each goal. Options with the highest score whether expressed in % of criterion achieved or some scale [e.g. 1-10 scale]. In some cases the criteria are given different weights to reflect their relative priority.

1. Criteria [or goals] are established prior to the design of options and before analysis
2. Both quantitative and qualitative criteria may be used
3. Criteria may be ranked or weighted
4. Values for each criterion are summed for each alternative to obtain overall goal/criterion achievement

Again: In this example, all the criteria are treated as if they are equal weight.
The Technical Advisory Group is another example of a group process that can be useful in eliciting information not likely to come from other forms of analysis. As in any group process it is important to communicate what authority the group has. In most cases, groups need to understand that their recommendations are advisory. In some exceptional circumstances, groups are invited to make decisions that are authoritative.

There are several steps in this process:

1. Convene a technical advisory committee that includes subject matter experts and policy leaders
2. Explain how criteria and options were chosen. After discussion of criteria and options, ask each individual to rate each option in terms of each criterion on a 1-10 scale.
3. Without showing how individuals rated options, show all the results of individual ratings
4. Ask the group to discuss the ratings, especially extreme ratings. No one is required to explain or defend their ratings
5. After discussion, individuals rate options again. The median value of all votes is used for each cell.
Because of the importance of agriculture for export and food security, a Hawaii law requires each county of the state to identify the best agricultural land for special protection from development.

Which lands should be identified for protection? The law identifies nine possible criteria for designating which agricultural lands are worthy of the designation of “Important Agricultural Lands.” The criteria include lands currently being used for agriculture, lands with sufficient quantities of water, lands with high quality soil and growing conditions, and adequate infrastructure.

A Technical Advisory Committee [TAC] composed of farmers, land owners, government officials, and agricultural experts was formed to review the criteria and how they apply—and to make recommendations to the County legislative body about which criteria are most important. After fourteen months of analysis of what the criteria mean in practice and how the might apply the group was ready to try to set priorities.

There are a variety of methods for determining which criteria are most relevant in the designation process. After TAC deliberations we chose a simple process for establishing priorities. Each member of the TAC was asked to allocate 100
points among the nine criteria in a private voting process. We then summarized TAC member votes for each criterion and calculated the median “score” for each criterion.

This selection process has the virtue of being easy to understand and apply. It also recognizes the interrelationships among the criteria. For example, soil quality is less important unless coupled with the availability of water. In the case of the TAC review, the ranking process produced several “screens” or groups of related criteria that together provide a basis for designating and mapping specific agricultural parcels. Three criteria tied for top ranking. These criteria were then used to produce maps illustrating one possible set of important agricultural lands.

After further public review, the TAC will make a recommendation to the County Council.
However, as you might imagine, applying the criteria is easier said than done, since this step involves subjective judgments. Thus in most cases it helps to apply a decision-aid tool of some sort so that differences of opinion can be overcome in a transparent, logical fashion. There are countless decision support tools of this sort; this slide mentions several that you may already be familiar with. Decision support tools provide a framework for ordering priorities and achieving consensus. In a few moments we will practice using two of these tools.

**Triple Bottom Line**

The triple bottom line consists of social equity, economic and environmental factors. An enterprise dedicated to the triple bottom line seeks to provide benefits to many constituencies and not to exploit or endanger any group of them. The "upstreaming" of a portion of profit from the marketing of finished goods back to the original producer of raw materials, for example, a farmer in fair trade agricultural practice, is a common feature. In concrete terms, a TBL business would not use child labor and monitor all contracted companies for child labor exploitation, would pay fair salaries to its workers, would maintain a safe work environment and tolerable working hours, and would not otherwise exploit a community or its labor force.

**ASK** the participants if they have ever used any of these tools, or any others. In what context were they used? Were the decision tools effective?
As noted in the previous slide, the tool to use really depends on your circumstances. No method is best at addressing all of the methodological challenges that you are likely to face.

**Uncertainty** applies to several methodological issues.

---There could be a large range of possible impacts

---there could be uncertainty in terms of data and measurements.

**Valuation** refers to markets and monetary values. Some things are easy to value, others are not. If there are a lot of non-market costs and benefits, it will make some tools more effective and others less effective.

---For proper and accurate valuation, you have to be able to calculate baselines, discount rates, etc

**Inclusion** refers to who is going to be involved in applying the evaluative criteria. It also considers the distributional impacts of the adaption options. If you are considering a large scale project that will affect many groups, then it is important to use a decision support tool that enables you to adequately consider the distribution of costs and benefits. Some tools are better at this than others.
CBA involves calculating and comparing all of the costs and benefits, which are expressed in monetary terms. The benefit of this approach is that it compares diverse impacts using a single metric (money). This makes comparison easy. However CBA doesn’t explicitly consider the distribution of costs and benefits. It is also difficult to consider the costs for things that are valuable but not valued in markets, like environmental goods and services and social or cultural values. Often CBA is misapplied such that non-market costs are excluded or ignored, which leads to misleading results.

The first step of CBA is to agree on the adaptation objective and identify potential options. The objective needs to be clearly stated, like achieving a particular standard of protection from flood risks. The second step is to establish a baseline. This is the situation without the adaptation intervention being carried out. Then you compare that to the “project line” (the situation with successful implementation of the option) to determine costs and benefits.

Step three is to quantify and aggregate the costs over specific time periods. This includes direct costs (like investment and regulatory costs) and indirect costs (e.g. social welfare losses and transitional costs).

Step four is to quantify and aggregate benefits over specific time periods. This includes
damage avoided from climate change impacts and co-benefits.

Step five is to compare the aggregated costs and benefits. Looking at the bottom line. The costs and benefits need to be discounted properly to calculate their present value. You can use three indicators of whether the options are efficient:

1. Net Present Value (NPV). This is the difference between the present value of the benefits and the present value of the costs. Should be greater than 0 for an option to be acceptable.

2. Benefits to cost ratio (BCR)…this is the ratio of the present value of benefits to the present value of the costs. If this is greater than 1 then the option is acceptable.

3. Internal Rate of Return (IRR)….this is the discount rate that makes NPV equal to 0. The higher the IRR, the better the option is.

When thinking about cost-benefit analysis, you can think about the costs of implementing the project versus the cost of not implementing the project. Cost benefit analysis is useful in these situations. It is predominantly an economic decision support tool. It helps to determine if the total monetary benefits of a selected adaptation action exceed the monetary costs. It is best when used where actions have focused objectives and where monetary costs and benefits can be generated and in situations when efficiency is the primary decision making criterion.

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These resources provide how-to information on how to carry out a cost-benefit analysis when preparing for climate change impacts. Each of these are included in the resources package provided to the participants.

Asian Development Bank’s “Economic Impacts of Climate Change in Southeast Asia” (2012) and “Economic Impacts of Climate Change in East Asia” (2012)

Intergovernmental Panel on Climate Change (IPCC)’s “Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation” (2012)

Intergovernmental Panel on Climate Change (IPCC) 2012: “Costs of Climate Extremes and Disasters” (Ch 4, pp. 264)

World Bank’s “Guide to Climate Change Adaptation in Cities” (2011)
**Multi-Criteria Analysis (MCA)**

- Use when monetary values are not obvious
- Use with a wide range of criteria
- Use when partial data is available

**Multi-criterion analysis** is another approach for use when monetary values are harder to define. It can generally accommodate quantitative and qualitative variables. MCA allows assessment of different adaptation options against a number of criteria. **Each criteria is given a weighting.** Using this weighting, an overall score for each option is obtained. The adaptation score with the highest option is the one selected.

This technique is **most useful when only partial data is available** or when cultural and ecological considerations are difficult to quantify and when monetary benefit or effectiveness are only two of many criteria.

One of the major benefits of MCA is that it allows for the use of both quantitative and qualitative information. It also allows for direct stakeholder engagement by allowing the beneficiaries for the adaptation options to be involved in choosing them.

However it is often difficult to assign weights, especially if there are many criteria and they differ in character.
URL to download UNFCCC document:
http://unfccc.int/resource/docs/publications/pub_nwp_costs_benefits_adaptation.pdf

URL to download MCA4climate:
The third major topic for today is “mainstreaming”.

Our learning objectives for this section are

1. Developing an understanding and awareness of mainstreaming
2. Development of mainstreaming priorities for your city

In order for climate change adaptation to be sustainable and applicable on a wide scale, it must be incorporated, integrated, or mainstreamed into the policy apparatus of government.

A key takeaway point from this section is that CCAR should not be seen as an additional project in addition to other city projects and priorities, but rather it should be seen as a set of considerations that can enhance the outcomes of other projects, and help protect existing city investments into the future. This fact has long been recognized; in fact a 2005 UK Government White Paper on International development noted that “Climate change poses the most serious long-term threat to development and the Millennium Development Goals”, but until recently development planning hasn’t paid too much attention to the potential impacts of climate change. So a city’s adaptation response should be
formulated as part of broader policies for development, including areas not directly related to climate change.

Another takeaway is for the participants to think about mainstreaming as a process rather than a discrete stage in planning. This means that there are increasing levels of mainstreaming, and so it is important to start off small with manageable, realistic mainstreaming actions. This section will help the participants to understand mainstreaming as a process and should help them to start thinking about immediate actions they can take to mainstream CCAR into their agencies and organizations, as well as more strategic plans for longer term mainstreaming efforts. We will begin with project level mainstreaming, and eventually we will work our way through sectoral mainstreaming and city wide mainstreaming. We will have several activities to help you organize your thoughts and generate ideas to push mainstreaming forward on your own projects, in your agencies, and in your municipalities.
This is where we are in the overall Resilience building process.
Note to Facilitator: Before bringing in the definition, ask the participants to answer the question first. Write their answers on a computer or flip chart. They may not be familiar with the concept of mainstreaming, and so it might be necessary to provide some hints. If this is the case remind the participants of some of the difficulties stemming from climate change adaptation at the administrative level. Mainstreaming in part involves strategies to overcome these difficulties.

“Mainstreaming” is a term used to describe the process of integrating climate change concerns and considerations into normal, regular local planning, programming, and budgeting processes, decisions, and capital investments. Mainstreaming implies that awareness of climate impacts and associated measures to address these impacts are integrated into existing and future policies and plans. Mainstreaming shifts responsibility for climate adaptation from single agencies or ministries to all sectors of government, civil society, and the private sector. However, to ensure mainstreaming does not lead to adaptation efforts becoming fragmented and the priority given to it being reduced, some sort of coordinating mechanism is required. Thus part of mainstreaming is about choosing which institutions will implement CCAR priority actions. Go with existing institutions? Implement through new coordinating agency? Some combination?
Note that mainstreaming is a **process**, and not a discrete step in climate change adaptation and resilience building. It is a multi-year, multi-stakeholder endeavor geared to change the very nature of a municipalities decision-making culture and practices, grounded in the contribution of climate change adaptation to human well-being and entails working with a range of government and non-government actors (this definition is based on the UNDP-UNEP definition).
Pose these questions (and others) to the group for them to discuss and explore. Implementation is always situation and tailored.

**How can CCAR priorities be programmed into government work plans and budgets?** (Sector plans or area management plans, local master or general development plans, building standards & codes, zoning restrictions, and disaster preparedness plans, response mechanisms, and resilience strategies, etc.)

**How can civil society groups, NGOs, and the private sector be enlisted to help?**

**How can CCAR priorities be phased in over time (planned to be upgraded progressively)?**

**Where will funding come from to finance CCAR priorities?** (external sources, internal budgets, green bonds, etc.) To finance resilience building and adaptation priorities? What are the requirements of each? Lead time required?
Mainstreaming is important for a number of reasons.

**BULLET 1:** One of the most important reasons for mainstreaming CCAR is that many cities are heavily dependent on climate sensitive sectors or public systems. This may be the case for your city. For example, if your city’s future economic development is dependent on an expanding export sector, or on being a regional distribution hub, critical infrastructural improvements associated with that role will most likely be subject to the impacts of climate change. Or if your city is dependent on tourism, this is another sector that is susceptible to climate change impacts. Critical urban systems include: energy supply, water supply and wastewater treatment, public transportation and traffic infrastructure and control, communications infrastructure, and food distribution systems, among others. Thus in the future climate change may make it more and more difficult for your city’s government to fulfill its visions and aspirations, and providing basic services may become more and more difficult. Mainstreaming of climate change adaptation and resilience considerations will enable your city to anticipate and prepare for these difficulties.

**BULLET 2:** Climate change adaptation is an area of growing concern and engagement for many countries and municipalities in the developing world. There are numerous uncertain effects of a changing climate which pose
significant risks for development, for example the achievement of the Millennium Development Goals. Much progress has been made towards achieving these goals, but because their impacts of climate change will in many cases fall disproportionately on the most vulnerable, these impacts could undermine progress made towards the MDGs. Moreover, many countries already face an adaptation deficit. As climate change accelerates this adaptation deficit has the potential to grow unless a serious adaptation program is implemented. We noted in previous modules that the impacts of climate change will not be experienced evenly, and that the poorest and most vulnerable in society are likely to be impacted disproportionately. Climate change is projected to reduce the value of the assets and degrade the livelihoods of poor people in terms of health, access to water, etc. So any strategy to address poverty should take climate change into account.

**BULLET 3:** It is increasingly realized that in the long term, climate change adaptation needs to be supported by an integrated, cross-cutting policy approach with effective mitigation efforts, or else it will not be sustainable. This is largely due to the fact that most of the highly-profitable “green” technologies exist on the “mitigation side” of CCAR, especially in terms of increased building energy efficiency (e.g., lighting, heating and cooling systems) and “alternative, low-carbon” transportation systems and incentives to switch more urban trips to public transport and away from solo-occupant private vehicles. Conversely, adaptation measures typically involve higher up-front costs with longer pay-back periods, thus discouraging private sector engagement. However, their greater economic benefit comes in the form of more uncertain, future “avoided costs” of averting or minimizing loss of life and injuries, post-disaster disease epidemics, damages to property and other assets, and setbacks to employment and livelihoods. By combining the two “sides” of adaptation and mitigation within a single, unified strategy of Resilience.

**BULLET 4:** Mainstreaming of climate change adaptation is also important because it increases the ability of the municipal government to avoid choices that will worsen its vulnerability to impacts of climate change. This phenomenon is referred to as maladaptation, and was the subject of some discussion in a previous module. For example, some development strategies can increase dependency on climate sensitive resources, especially those that rely on primary sector activities like agriculture or fisheries. The viability of these strategies is impacted by climate, so adaptation should be taken into consideration. Another example from the Southeast Asian context that most of you will be familiar with is the destruction of mangroves for other uses. This boosts economic development in the short term, but in the long term it increases vulnerability.

**BULLET 5:** For the reasons stated in bullet 3, coordinated, integrated actions taken that
take advantage of the complementary benefit streams and financial incentives or signals offered by mitigation measures in some cases and adaptation measures in others offer the best chance of attracting public investments by governments and donors alike that in turn can catalyze private sector engagement by changing the risk/reward ratio. It is in the private sector where the vast majority (well over 90%) of available managed global financial assets reside, contrary to current public perception or knowledge, and not in government coffers or MDBs or international donor agencies. Thus, it is critical that public resources, tools, and capabilities leverage or catalyze these much larger sources of potential funding for CCAR interventions in the near future.

**BULLET 6:** Cities that are more assertive in addressing the risks and threats posed by climate change will be able to attract more financial resources from local or national level private lending institutions or investors due to their lower risk profiles, and they make themselves more attractive as places to live and work due to the large number of “co-benefits” associated with taking CCAR measures (e.g., more urban “green” open spaces, generally better infrastructure and planning processes, emphasis placed on lighter industry, tourism, academic, and/or retail/commercial economic activities over polluting heavy industries and manufacturing, healthier air and water, more recreational and environmentally intact areas nearby due to the acceptance of their “environmental services” provided to city dwellers, etc.).


A PDF of the Guidebook is also included in the resources package for the participants.
**Note to Facilitator:** Addressing the questions on this slide may take as long as an hour.

**Procedure:**

1. divide the participants into 5-6 groups. Each of them will be responsible for discussing one of these fundamental questions that relates to mainstreaming of climate change considerations into the broader policy and institutional frameworks.

2. In their groups they will talk for 20 minutes about the assigned question. Each group will be given the written challenge it will discuss (these challenges are described below; you should print them out so the participants can read them), and provided with a flip chart and markers to organize their ideas. After dividing the participants into groups, ask them to come up with group definitions of the terms in red text before addressing the question. Underscore the point that it is important to have common definitions. Ask them to discuss in their groups examples from their home context.
3. Then at the end of 20 minutes each group will make an informal 5 minute report to all of the participants to present the results of their discussion. The goal of this activity is not necessarily to come up with definitive answers, but instead to begin thinking about some of the larger issues and questions associated with mainstreaming.

**GROUP 1: Existing institutions or new ones?** In some instances around the world, new institutions have been created to tackle the problem of climate change adaptation. There are several examples of this in Southeast Asia; countries like Indonesia have created national level bodies for addressing climate change issues. Other institutions have been created at the city level. However, creating new institutions is a difficult process, and in some cases it may be counter-productive and lead to “bloated government” or resentment and “push back” by other existing institutions. Thus a major consideration when thinking about climate change governance is to analyze whether the existing institutional-bureaucratic structure can handle climate change adaptation, or whether that structure should be rearranged and augmented. Obviously the second option is much more involved and time consuming. It may be more realistic and effective to work with existing structures. Two frameworks that might work are special, *ad-hoc* steering committees and cross-sectoral working groups augmented by other stakeholders.

Building on existing institutions may encourage stability and legitimacy and insure available staff and resources. New agencies may or may not be sustainable. At the same time, existing institutions may have inter- and intra-agencies rivalries or lack effective channels of communication and coordination necessary to design and implement cross-sectoral adaptation plans.

Group 1 participants should discuss this particular issue in their context. How does it currently work in your city? Would it be more effective to work within existing institutions, or would it be better to establish a new institution? *Ask* the participants to discuss positives and negatives of each approach in their context. In moving forward, do you think it would be beneficial to develop a proposal for both approaches?

**GROUP 2: Coping with technical uncertainty.** There are some major obstacles deriving from the lack of information on climate change impacts. First of all, climate change impacts are in the future, and there is a degree of uncertainty associated with them. We can have an idea of what might happen in the future, but we can’t know for certain. This is compounded by the lack of data and modeling frameworks at the city level. The usual approach to planning in general (not just for adaptation planning) requires city-
specific knowledge of vulnerability and impacts, which is resource intensive and requires, among other things, an updated and comprehensive database. It also would require downscaling of climate change impacts for specific urban locations. Most of this information is not available, and so under traditional planning procedures, it is difficult to get public support and political backing to engage in adaptation and resilience measures beyond the project level. So how do you make plans in this environment of uncertainty? How do you know what resources you will need moving into the future? How do you get them? Group 2 participants should discuss examples of technical uncertainty, availability of resources for resilience building measures, and political resistance. How might you address these issues? What characteristics would your organization need to function and perform effectively amidst uncertainty? Technical uncertainty is for the most part a characteristic of climate change threats, as we have discussed in previous modules. The availability of resources as well as political resistance however are characteristics of the local governance context. Thus the participants should take some time discussing these issues.

One of the best ways of overcoming concerns about technical uncertainties or political/public resistance or hesitation, and the ability to obtain adequate resources and expertise to implement CCAR options is through an approach being promoted by the World Bank called “Open Development.” This will be discussed later in this module, but it basically revolves around broad-based participation, transparency of process, and accountability of key actors in the process and in the results achieved.

Technical and political uncertainty can be addressed by initially concentrating on a variety of “low regrets” adaptation initiatives that can be justified in terms of dealing with current, well-understood climate threats. Climate change impacts will cut across economic sectors as well as geographic and administrative boundaries, so adaptation policies need to be formulated as part of broader policies for development. UNEP advises that “implementing specific adaptation measures (geared to specific problems, sectors, or population groups) may be effective in certain circumstances, but in the long run, a project-based approach to adaptation planning and financing may not produce the scale of results that is needed”. Thus adaptation needs to be supported by a cross-cutting, integrated policy approach of looking for complementarities between mitigation and adaptation measures.

GROUP 3: Building political/public support. It has been shown that one of the key determinants of a sustained commitment to adaptation and resilience building is political support from elected leaders. At the same time, if elected officials and high ranking bureaucrats do not have a sense of “ownership”, or an adequate understanding of the importance of building resilience and adaptive capacity, CCAR may be neglected or even undermined by other policy priorities. Likewise, it is very important to build and
Group 3 will discuss specific challenges that arise from formal and informal political processes, and how these obstacles might be overcome. The group will also discuss how non-governmental groups, or the general public might be an obstacle for CCAR, and how to overcome this obstacle.

**GROUP 4: Learning/Experimentation as Institutional Attributes.** As we’ve discussed, a key element of resilience at the project level is experimentation and learning. This is an important part of flexibility and adaptability. However these are also important attributes at the institutional level. This is especially true when it comes to incorporating resilience and climate change adaptation into the broader policy and planning landscape, since these represent policy frontiers and there is not a large body of best practices literature. Group 4 participants will discuss what is meant by the terms “experimentation” and “social learning.” Why are these key considerations in implementing strategies of resilience? Are there mechanisms that facilitate experimentation and social learning in your city? Remind the participants that both experimentation and social learning are attributes of resilience in terms of institutions. Ask the participants to discuss some examples of experimentation and social learning, and how these might be incorporated into both existing and new institutions for implementing CCAR options/interventions. How can you institutionalize and operationalize experimentation and social learning? What sorts of relationships between the different levels of an organization are necessary? How would you foster a culture of experimentation and social learning in your organization? What are the obstacles?

How do we build evaluation and social learning into institutional practices and among a diverse set of stakeholders simultaneously? As we have pointed out in previous modules, social learning is one of the core principles of building resilience. A certain degree of experimentation and structured learning with adaptation is necessary in CCAR implementation. This is useful so that new ideas can be “pilot tested” and the process can be managed ‘adaptively,’ as it is likely to be new and novel to many of those involved. However, learning almost always involves some “failure” and this ‘cost’ should be anticipated upfront and built into all stakeholders’ expectations.

**GROUP 4: Group 4 participants will think about transparency and accountability.** These have been recognized as key characteristics in good governance, and many donor funded initiatives now explicitly recognize the importance of accountability and transparency for project success. Under governance that is truly transparent and accountable, citizens have access to crucial information about how government operates, establishes priorities, and makes decisions. This applies not just to climate change adaptation projects, but to many donor-funded development projects in
general. **Ask** the participants what are the advantages of transparency and accountability. Ask them if there are disadvantages or drawbacks.

This is a delicate and sensitive issue in many locales. The CCAR implementation process requires a high degree of transparency of process and accountability for achieving results. This does not always fit well with existing political or bureaucratic organizations used to dealing with issues and making decision in a far less “open and transparent” manner. Each city or town will have to decide just how far they are willing to go with this approach.

**GROUP 5**: Engaging local communities, NGOs and CSOs, and reps from the private sector to identify and assess local adaptation priorities and strategies encourages “buy in” and improves the chances that the CCAR options will be sustained and supported over time by these groups since they were involved in their creation, design, and implementation. However, the coordination and collaboration of these groups is not easy nor guaranteed to be successful. In some cases, strong interest groups will attempt to ‘take over’ the process or skew the results or findings to their own advantage. Some groups may try to drown out the voices of other stakeholders or protect their own narrow, parochial economic, social or political interests. In fact, this should be anticipated and strategies developed ahead-of-time to minimize such corrupting influences or processes from taking over the broader, public-good interests that this “Open Development” approach is intended to serve.

The 6th and last bullet will be the subject of more in-depth discussion over the last module (Module 7). No group will be assigned to talk about this. But the point needs to be made here that all of the previous considerations need to be carefully considered before you begin looking for local financial resources, transfer from central governments, support from MDBs and donors, or funds from private financial markets. In the end, the resources needed will likely come from a combination of all, or most, of these sources in “blended” packages.

The six (6) key issues listed above include other critical considerations that should be taken into account at the start of this mainstreaming process by those leading this CCAR effort. There are no “right answers” as each circumstance and situation requires its own unique balance of competing interests and needs/preferences to be found.
Note to Facilitator: We might think of mainstreaming as a process that is operating at several levels. At each of these levels, mainstreaming has basically the same considerations, but there are different challenges and opportunities at each of these levels. Moreover, mainstreaming at higher levels (at the sector level or the whole city level) is more complicated (but nonetheless necessary) than mainstreaming at the project level.

First let’s think about mainstreaming at the project level. This refers to a process of considering climate risks to development projects, and of adjusting project activities and approaches to address these risks. The assumption is that the project has a goal related to poverty reduction, livelihood security, or improved well-being and that the results and impact of the project can be improved by considering climate change adaptation. Mainstreaming at the project level is important for two fundamental reasons:

1. It helps to ensure that current and future projects are not maladaptive and inadvertently increase vulnerability to climate change in the future;

2. It helps to maximize results and ensure that projects continue to be good investments in the face of climate change. In other words, some projects may be vulnerable to the impacts of climate change (e.g. floods or sea-level rise damaging infrastructure).

Project level mainstreaming provides opportunities for planners to incorporate the basic principles of resilience that we have been discussing in previous modules. For example, an increase in the frequency and severity of floods may require water pumps to be built above
predicted flood heights. For some projects, climate risk will be a major consideration and will require substantive analytical inputs. For others, climate risk may be a very minor consideration and thus would only warrant a small amount of analytical work.

Some steps in project level mainstreaming would include

1. Examining the vulnerability of development programs and projects to current and future climate risks
2. Assessing the extent to which such projects already consider and manage these risks
3. Evaluate potential adaptation measure to address remaining risks

**Sectoral level mainstreaming** refers to mainstreaming within an agency and is more complex than project level mainstreaming. However, if CCAR is successfully mainstreamed at the sector level, CCAR will automatically be factored into projects and policies developed at the sectoral level. **Ask** the participants what types of approaches sectoral level mainstreaming might entail. What sorts of challenges might one expect at the sector level?

**City-wide mainstreaming** addresses the organizational environment in which policies and programs are developed and implemented. Mainstreaming at the whole city level will ensure that the governance environment is sensitive to climate change issues and that sufficient technical capacity and human resources exist to successfully incorporate climate change adaptation into policy frameworks.

While working towards strategic level mainstreaming, your organization or agency can take steps at the operational level to begin the process of integrating climate change adaptation.

There are many toolboxes and guides out there that can help you mainstream climate change adaptation and resilience considerations at the project and operational level. One good framework is CARE’s Climate Vulnerability and Adaptation Pathway, which has seven steps for mainstreaming. The CVA pathway can be used for designing new projects or it can be incorporated into ongoing projects and programs. This handbook is available online and comes complete with tools that will help you implement the CVA pathway.


A PDF of the manual is included in the resources package provided to the participants.
Note to Facilitator: The first thing we want to do is think about what effective mainstreaming looks like at the sector or city-wide level. There are a number of characteristics, and we’ll go into more detail about a few of them. First and foremost, mainstreaming needs to be thought of as a process that takes time. Thus we’ll structure our discussion of mainstreaming in stages, beginning with some steps you can take in your own agency or organization. These initial steps can lay the foundation for mainstreaming and can then help build support out beyond your agency to other agencies addressing the same concern or threat from a different angle or perspective.

Burch et al (2013) describe 6 key elements of successful mainstreaming. These aspects might serve as a useful diagnostic in thinking about the progress of mainstreaming in your own municipality; we can think of them as “steps” to effective mainstreaming. These steps represent increasing levels of integration of climate change and mitigation in planning, policymaking, and implementation.

1. Engaging local community, civil society, and business stakeholders, gaining their attention, support, and cooperation
2. Building awareness and capacity within communities, civil society, the
private sector, and local gov’t. This can be developed through: briefings, training materials, short courses for staff and partners, and regular knowledge and information exchange between staff and partners working in different sectors and sharing lessons learnt.

3. Developing comprehensive, integrated climate change mitigation and adaptation strategies and measures

4. Agreeing on adaptation solutions that are viable, feasible, and achievable.

5. Implementing SMART climate- and disaster-resilient strategies, plans, policies and investments that explicitly consider trade-offs and synergies between climate change adaptation and other goals such as mitigation and sustainable development. SMART stands for:

   S = Specific
   M = Measurable
   A = Achievable
   R = Relevant
   T = Time-bound

Do these steps follow one another logically? Do they build upon one another? While you might not be ready for the final step in your municipality, do you think you might be ready for the first step?
**Note to Facilitator:** There are basically two **simultaneous** or at least closely-synchronized or related processes taking place in most urban governments on an annual basis. First, there is typically a **planning process** that varies as broadly as cities varies among themselves, from the simplest, most informal systems, to the most formalized systems imaginable. Secondly, there is a **budget cycle** underway that allocates scarce resources among all the various expenditure priorities and community needs or desires.

**Ask** the participants if they are familiar with each of these processes, and the steps in the processes. **Ask** them to suggest entry points for CCAR in these processes. At what point should CCAR be considered? And in what ways?

Mainstreaming CCAR measures into these processes is all about informing decision-makers in individual local government departments about the relative importance and urgency of proposed CCAR actions, and convincing them of the need to allocate resources to addressing it and putting it into their annual plans (including longer-term capital investment plans) and budget requests.
**Local Government as “Conductor” of the Orchestra**

- Empowering – Engaging – Leveraging – Partnering
- Attracting Private Sector & Donor Investments in Resilience

**Note to Facilitator:** This slide would follow the same logic as the last two slides, but this time it is focused on the role of local government. While we don’t want to give too many ideas of our own or “answers” that might cut off or discourage original thinking on the participants’ parts, there are a number of roles that are commonly mentioned in the literature on the subject.

Local government should be seen as the **“conductor” or coordinator** of all the other stakeholders’ participation and involvement in the planning and implementation of CCAR measures. It will largely be Government’s ability to involve and leverage the talents, resources, and expertise of others that will determine the degree of success they encounter in tackling the threats of climate change and building greater resilience to it. They would handle all logistical support issues, schedule meetings, and organize inputs to the process (in terms of obtaining any technical analysis done prior to decisions being made or gathering inputs from various stakeholder groups), etc.

For example, the local government might work to “incentivize” local **community savings groups** led by women, but helped or supported by local gov’t or sponsored NGOs to conduct simple VRAs and help with the process of prioritizing and engineering any desired improvements to public infrastructure or service delivery systems. Another avenue of action would be to “professionalize”
their own transparency and accountability through having credible public financial management (FM) systems (covering procurement, expense accounting, and disbursements) for both recurring annual work plans and budgets as well as longer-term Capital Investment Planning (CIP) and Asset Management Programs in place. These will be discussed further in Module 7.

Local government should also function as the “honest broker” or arbiter of the many different perspectives and interests of various stakeholders or involved parties. This would mean that the local Gov’t would, in effect, give up being a “protagonist” or active player in the process with a stated position or view on any particular topic or aspect of the planning and implementation of CCAR measures. Instead, they would mediate differences between the different interests/perspectives and seek common ground upon which to base consensus decisions.

A key issue will be the degree of decision-making authority that is retained by Government agencies or elected/appointed officials, or the degree to which it is delegated to members of the core team and other stakeholders. Since these CCAR options will all involve investments of staff time, public resources, and political capital, it is imperative that the involved/relevant departments (e.g., public works, transportation, planning, the mayor’s or governor’s office, and the budget or financial management departments) be intimately involved and ‘on-board’ with the options being discussed and selected in terms of their financial and human resources inputs/requirements. These issues cannot be disassociated or distanced from the issues of transparency and accountability. ASK the participants to think about these questions, and if they wish, to share their thoughts or views on these issues with the other participants.

Clip art source: http://shorthairstylenow.net/orchestra/orchestra-clip-art.html
Note to Facilitator: This slide makes the point that Local Government does **not** have to do all the work (or take all of the credit or blame) of developing, designing, selecting, and implementing CCAR options or actions. What it should strive to do is **organize and ‘orchestrate’ other key stakeholders** in the process, such as community groups, NGOs & CSOs, the Private Sector, other levels of gov’t (regional or provincial and national), relevant international organizations, and academia and research groups, to help do the work by leveraging their human, technological, logistical and financial resources and assets as active participants in the process and as people or organizations that are **not immune** to these same impacts and who will also be affected by them. After all, **they all have a self-interest in participating** in a process to **reduce the risks they share with everyone else** and build a more resilient community or urban area.

It might be useful to use an often-quoted phrase by the late, former **Governor of the State of New York** in the United States, **Mario Cuomo** once said during a ‘garbage strike crisis’ that, “it is **not** the government’s job to pick up the garbage; rather it is the government’s job to make sure the garbage gets picked up!” What he meant by this was that government workers (public employees) did not have to do the actual work, but rather that government’s job was to orchestrate that somebody do it, not necessarily public employees. In some or many cases, it can be more efficient and better to contract work to private firms or NGOs.
The facilitator should go over each of these points individually and check for understanding.
With this deeper understanding of:

- Process of “mainstreaming” Resilience in local planning & budgeting cycles
- Roles & responsibilities of different actors in the process
- Various Managerial, Physical, Financial & Governance Tools and Assets at the disposal of local governments...

We are now ready to discuss How to Prepare Project or Program Proposals that are credit-worthy and “bank-able”

Note to Facilitator:
Dengan pemahaman ini lebih dalam:
• Proses "pengarusutamaan" Ketangguhan dalam perencanaan lokal & siklus penganggaran
• Peran & tanggung jawab aktor yang berbeda dalam proses
• Berbagai manajerial, fisik, keuangan & tata kelola dan aset dilimpahkan kepada pemerintah daerah

Kita sekarang siap untuk membahas bagaimana mempersiapkan proposal proyek atau program yang layak untuk mendapatkan dukungan dana

Note to Facilitator:
This slide is for an art exhibit that was in Jogjakarta, Indonesia, but it says “Good Bye” in Tagalog.

Image from http://www.jogjapages.com/event/salamat-po/