## **Indicator Framework: All Tables**

The Indicator Framework includes a total of 34 indicators broken down into 6 categories (agenda setting/strategies, policy/plan formulation, implementation, feedback/evaluation, dissemination, GHG emissions). The Indicator Framework tries to represent climate-related actions undertaken at any given moment by a local government (LG) as either incremental, transitional or transformative. Zooming out to the level of the indicator categories allows the user to assess, along thematic lines, where (and how) things are changing in local government GHG emissions, policy, planning or operations. Indicator categories reflect local government mandates to undertake strategic plans, regulate and operate internally. The indicator criteria have been informed by key concepts embedded in social practice theories, multi-level perspective, and socio-ecological systems thinking.

Click on the Indicators column to read more about each one. Bolded titles refer to the 6 categories, while the numbered headings refer to indicators. Note that there are four tables in total, with the first three showing one category per table, and the last grouping together 3 categories.

**Table 1: Agenda Setting and Strategy** 

Local Governement Climate Action Indicator Framework				
Indicators	Incremental Actions	Transitional Actions	Transformative Actions	
	incremental Actions	Transitional Actions	Transformative Actions	
Agenda Setting and Strategy  1. Strategic Approach				
Description: How are climate actions framed within the overall strategy of the Local Government (LG)? Is the LG undertaking discrete climate actions to reduce emissions and/or adapt to future climate risks? Does the LG approach climate action as part of a broader sustainability agenda?	Climate-related initiatives/programs are framed as either efforts to mitigate or adapt to climate change.	Climate-related initiatives/programs are seen to contribute to multiple LG departmental strategies.	Climate-related initiatives/programs are framed as vital parts of a more holistic sustainable community agenda/narrative/strategy.	
2. Champions  Description: Who is providing the leadership vision for climate action? Is the leadership at multiple levels? Are the stakeholders external to the LG, such as citizen groups and the private sector? Are they working closely with internal resources such as the city government and the judiciary?		Small, impassioned, but dispersed group of social entrepreneurs within LG, supported by developed local network of external stakeholders	Majority of elected officials and senior staff, supported by research/policy/activist networks operating at multiple levels	
3. Motivational Drivers  Description: What is motivating the LG to act on climate change? Is it simply due to legal requirements or a vision for the future? Do the drivers involve diverse sectors and ongoing actions, such as reduced adaption costs, liveability, and health?	Response to legal requirement or desire for competitiveness or clean environment; vision of ecological modernization	Innovation leading to green jobs, energy independence, and economic diversification and competitiveness	Improved human health and community liveability; improved quality of local environment; reduced adaptation costs	
4. Mandate  Description: How strong is the alignment of LG roles and responsibilities with existing areas and actions related to adaptation and mitigation of climate change? (e.g. is renewable energy provision outside of the normal service delivery model; is air and water pollution and flood control authority shared with senior levels of government?) If responsibility is too narrow or difficult to attribute, it inhibits action.	Little to no alignment leading to diminished capacity to succeed on meaningful climate action	Active participation in voluntary intergovernmental sectoral (e.g. Water, building codes) committees	LG roles clearly defined within an integrated regulatory framework optimized for climate action	
5. Integrated planning and programs  Description: To what extent does LG incorporate climate science, adaptation strategies, and mitigation actions into daily practices, decision-making, and long-term plans and investments? How aligned are LG departments regarding climate risks/opportunities, emission sources and magnitude? What are the linkages to	Lack of agreement leading to weak / uneven consideration of climate	Environment-related departments understand risks/opportunities and try	Institution understands climate change risks/opportunities integrates	
departmental services, decisions, and functions?	principles by departments wrt operational or investment decisions	their best to include principles in their work	these into all local government decision-making criteria	

## 6. Mitigation and Adaptation Description: How closely linked are mitigation and adaptation in identifying LG climate priorities? Typically, the dominant focus among Local Governments (LGs) is on mitigation. Integrating responses to both at the local level is important as vulnerability and adaptive capacity are largely determined by local conditions. What is the degree to which hard approaches to climate (walls, pump Synergies and contradictions of stations, etc) are or are not considered mitigation and adaptation understood by institution and reflected in climate alongside soft approaches (wetlands, plants, Adaptation primary focus, with Strategies or plans developed for both, mitigation given only cursory attention but considered as largely separate issues action plans, OCPs and ICSPs.

**Table 2: Policy and Plan Formulation** 

Local Governement Climate Action Indicator Framework			
Indicators	Incremental Actions	Transitional Actions	Transformative Actions
Policy and Plan Formulation			
1. GHG accounting and inventories  Description: How are LGs accounting for GHG emissions? A standard method that allows for regular, easy updating of inventories is ideal. Keeping inventories updated (by integrating with departmental reporting structures) allows for comparability between local governments, and for evaluation and feedback on climate policy, plans, and actions.	Non-standardized emissions accounting method used; irregular updates (if any) to inventory	Standard accounting method used; comparability possible; regular updates performed, but data highly aggregated impairing policy evaluation; price (\$25/t > X	Standard method used; inventory updated (easily) annually; data highly disaggregated; policy evaluation possible; price (\$75/t > X
Community engagement			
Description: To what extent is the community engaged in the LG's climate policy formulation and climate solutions? Ideal engagement entails providing equitable access to the process, and the creation of safe spaces to build trust among social actors in the leadership of the LG. This also requires actively engaging with diverse sectors, and levels of government for reflection and to build understanding across a broad cross-section of stakeholders, on how climate change and climate protection will affect community development.	Limited set of stakeholder groups consulted; consultation rather one-way in nature	Active, two-way communication; variety of engagement tools used to access general public; prime focus is on traditional stakeholder groups	
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3. Science-policy capacity  Description: To what degree does the LG have access to, and make use of, relevant and reliable climate science and policy expertise?  What diverse sources are accessed, locally, nationally and internationally? The use of this knowledge is key to establishing the internal policy-making capacity and to increasing a common understanding regarding how climate change will affect a community.  4. Direct and indirect costs/benefits  Description: When considering the costs of mitigation and adaptation in policy creation, does the LG take into account the direct as well as the indirect costs and benefits (similar	formulation capacity	Access to expertise and know-how uneven across LG with respect to quality and quantity; results in uneven departmental policy development capacity.	Climate science related clear and disseminated widely across LG; functional links between policy- and decision-makers and knowledge producers (academia / experts)  Policy based on accounting standards and indicators that
to co-benefits), especially when looking at the long term? Ideally, the short and long-term benefits (direct and indirect) are quantified or valued.	Focus on near-term direct costs / benefits, and an uncertain stream of future costs / benefits; paying today more expensive than paying tomorrow.	Indirect (co-) benefits (e.g. Public health, energy security) considered in policy formulation and evaluation.	considers broad range of near and short term benefits of strong climate action today, and quantifying the cobenefits.
5. Climate policy networks			

Description: How much does the LG engage with external expertise, such as research centres of excellence or transnational networks? This can be crucial to access leading-edge climate science, to learn and share knowledge and experience, and to create new norms.  6. Policy congruence and alignment	Little value seen in engaging with national or transnational climate research networks.	Passive engagement / participation with national / transnational networks; limited encounters with best practice and diminished dissemination capacity; member of FCM PCP (at or below level 3).	Active engagement with networks and social learning; adopting (experimenting with) and developing (sharing) best practice; member of FCM PCP (level 5 achieved) and other int'll networks (C40, UCLG, etc.)
Description: How aligned is the government, both vertically (among levels of government), and horizontally (across sectors and agencies)? Ideally, there is a system in place to evaluate the synergies and contradictions between intersecting policies.	Misaligned gov't policy results in unclear vision 'mal-adaptation' or 'mal-mitigation'	LG aware of conflicts and trying to mitigate same through strategic partnerships and collaboration with gov't at all levels.	Aligned incentives between gov't levels and across sectoral policy areas; mandatory regulatory impact assessment to include climate change considerations.
7. Integrated planning framework  Description: How well is the diversity of community values and needs incorporated into departmental strategic plans? Aspects such as the LG's natural setting, spatial form, and built environments are relatively static but subject of future modification through spatial planning and management, while aspects such as land use, neighbourhood densities, the character of the built environment, parks, and open spaces, as well as public infrastructure and facilities are determined by the LG. To what degree is integrated strategic planning pursued and supported by LG priorities structures and actions, with environmental, social, and economic needs and values considered? For example, integrated land use and transportation planning increases density of developed land. Planning for mixed-use development, and closer proximity to transit and/or destinations can reduce vehicle kms traveled.	No integrated planning framework; planning underpinned by growth assumptions and free-market mechanisms.	Climate / environmental goals incorporated into OCP only; sectoral plans (e.g. waste, land-use, transport, water) non-integrated.	Climate, land-use, transport, water and waste plans and actions integrated and fundamentally congruent/consistent, supported by a regulatory framework.
8.Planning horizon  Description: How long-term are the plans for climate change action? Climate change represents a long-term challenge that requires action over both short- and long-term, and therefore planning should reflect this. The timing of climate actions need to align with the length of plans, and vice-versa. Ideally, plans and their accountability transcend political cycles.  9. Climate Action  Description: What is the nature of LG actions? Is the preference for short-term, easy & unlinked actions that leverage maximum external funds, or are they more long-term, priority-based and strategic?	Focus on short-term (i.e. 5 yr), with aspirational attention paid to time periods beyond 10 years.  Short-term; focus on low-hanging fruit and guick returns; not joined up.	Long-term climate targets set, yet plans are clear only on actions within 2-5 year period.  Short- and medium-term but preference for short-term actions; actions taken strongly linked to governmentt funding that arises.	Plans contain concurrent and sequential actions, with regular monitoring / reporting / updating requirements, throughout duration of plan.  Actions taken according to priority and strategic sequencing; government funding synergistic vs distracting; experimentation encouraged.
Description: To what degree does the LG's legal authority align with locally relevant climate areas (e.g. local waste management, local water supply and distribution, local energy supply, transport infrastructure, buildings, and land use)? Energy policy is traditionally considered a supra-local issue, one that is controlled at the state/provincial, national, or trans-national level. Because of this, LG has to be strategic with their authority and influence in order to align with outside authorities.	LG lacks jurisdiction over matters that determine their GHG emissions; legal authority resides with higher levels of gov't.	Devolution of authority to LG without matching funding, revenue generating abilities, or sufficient capacity to permit strategic action.	Decision-making powers and financial controls at the LG level in key policy areas in place; LG spheres of influence well aligned with climate areas requiring action.

**Table 3: Implementation** 

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Local Government Climate Action Indicator Framework Indicators Incremental Actions Transitional Actions Transformative A			
Implementation			
Corporate climate actions			
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Description: How are LGs accounting for GHG			
emissions? A standard method that allows for			
regular, easy updating of inventories is ideal.	LG undertakes corp. building retrofits,		Restorative/passive new civic
Keeping inventories updated (by integrating	recycling, H20 conservation, and	Corporate green fleet, van-p/car-pooling,	buildings, comprehensive retrofit
with departmental reporting structures) allows	participation in Earth Hour, Car-Free	solar panels, green roofs, building retrofit	program, E-fleet & 3rd party car-
for comparability between local governments,	Day, Bike to Work Week. Signed Prov'l	projects and renewable energies. Going	sharing services; Carbon fund in
and for evaluation and feedback on climate	Climate Action Charter & buying	toward C-neutrality via carbon fund and	place; C-neutral via internal projects;
policy, plans, and actions.	market offsets.	internal emission reduction projects.	100% renewables target of 2030.
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<ol><li>Partnerships, strategic alliances</li></ol>			
Description: The extent to which the LG			
engages in partnerships with other levels of			
government or parallel agencies to enable or			
stimulate climate action (e.g. collaborating with			
regional institutions to address adaptation			
issues which are typically best addressed at			LG actively engaged in partnership
this level). Strategic alliances with researchers,	Partnerships limited to existing regional		models to take concrete climate
civil society leaders and quasi-institutional	cooperation models over issues like	levels of gov't, civil society or business to	actions and deliver more climate-
organizations.	water and waste management.	advance strategic climate action.	friendly core services.
Local government controlled service			
delivery			
		LG working to raise awareness of climate-	
Description: How flexible is the LG when it	LG undertakes traditional delivery of	friendly ways in which residents can	delivery of a climate-friendly service
comes to adjusting and expanding its service	water, waste and other infrastructure	engage with local services (e.g. Water	(e.g. E-efficiency housing, bicycle-
delivery model (i.e. waste, water) to enable	services without special regard for	conservation, waste recycling, organics	sharing network, district enery based
climate friendly community developement?	climate imperatives.	recycling, energy efficiency).	on renewables) to residents.
4. Rule making - Local Government climate			
regulations			
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Description: How active is the LG in			
regulations favouring climate-friendly			
development? This includes: enforcing			
regulations from senior levels of government			
that are related to energy and climate;			
lobbying senior levels of government for			
building code improvements; rezoning			
vulnerable areas to adapt to climate change or			
to increase housing density; infill development;			
reuse of buildings; green building checklists;			
density bonuses for green buildings,		Stretch' code embraced, E-efficiency	LG flexibility / autonomy over bldg
development permit areas (DPA) for energy	Handful of opt-in programmes offered	req'mts in DPA's, min energy performance	codes; net-positive bldgs and
efficiency; building energy efficiency labelling;	to residents and businesses (e.g.	criteria for new zonings; green building /	passive house for new / existing
and mandatory hook-up to district energy	Sustainability checklist, bldg energy	sustainability checklist mandatory for all	houses; mixed use zoning, compact
systems.	labelling, solar-ready, etc.).	new bldg permits.	and transit-oriented development.
5. Experimentation / innovation			
Description: How breadly does the LO			
Description: How broadly does the LG			
encourage and facilitate experimentation and			
innovation around climate-friendly policies,			
practises, or technologies, both in and outside			
of LG? This includes providing incentives,			
encouraging risk-taking, and creatingve safe		Demaits comparisonatelian (in and and it)	I C in continuing and the continue of
spaces to innovate, as well as providing		Permits experimentation (in and outside of	51,
technical and financial support from senior	Francisco de Militar de 199	LG) on climate-friendly policies, practices	
levels of government. The results of	Encouraged within traditional business	and technologies, and advertises this	through partnerships; champions /
experimentation are monitored closely and the	_	modestly; modest to no financial	protects niche experiments;
results are shared widely.	in climate domain.	incentives.	disseminates successes.
6 Institutional arrangements			
6. Institutional arrangements			

Description: In the context of delivering on strategic climate priorities, how closely coordinated and aligned are the LG departments on climate mitigation and adaptation, including integrated strategies? What is the degree of shared understandings and ways for moving forward, short and long-term? Are climate actions delivered as project-based initiatives (involving multiple departments and expertise), or are they undertaken as single department-based projects? High-functioning LGs exhibit a common understanding of climate risks and opportunities, respect between departments, shared thinking about operationals and capital investment decisions, a healthy science-policy relationship, and a well-developed climate policy and implementation capacity.		Central coordinating group responsible for climate action across all dept's and for mainstreaming climate goals; or climate group within each climate-relevant dept	Department structures are aligned and mandates reflecting LG climate change areas, principles and priorities are embedded through the LG.
7. Institutional capacity  Description: How evenly are resources (financial and know-how) distributed across the LG in order to develop integrated policy formulation, implementation, monitoring, and adjustment? Are the necessary resources in place?	Uneven; climate issues the pervue of sustainability folks.	Limited internal expertise exists; little to no budget for external expertise; full-time Sustainability or Energy Manager in place (# staff linked to size of community); no clear climate mandate for climate-relevant dept's.	climate/sustainability goals embedded in all dept plans; climate action steering group ensures
8. Horizontal linkages  Description: How engaged is the LG in strategic alliances and partnerships in order to deliver comprehensive climate action? With these partnerships in place, policies can be more widely implemented across the region, and two-way learning occurs. If partnerships are fragmented, this results in implementation gaps, depending on jurisdictions.		LG engaged in formal partnerships with sectoral actors (govt'l, Crown Corp's and non-govt'l) to enhance policy formulation / implementation; lessons learned / best practice being shared via partners.	LG well embedded in formal / non- formal sectoral partnership network and climate policies are jointly formulated and implemented via this network. Social learning occurring.
9. Financial support  Description: How supported are climate actions, both within and outside of the LG? The policy and regulatory framework developed by senior levels of government plays a key role in questions of financial support. Often, internal funding is not available or is insufficient to permit proper implementation of plans, since LGs are loathe to dedicate tax-based funding to climate actions and, therefore, rely on senior levels of government. This funding model leaves climate action at the LG-level vulnerable to policy misalignments by different levels of government, in addition to vulnerabilities to election cycles and senior government budget dynamics.	LG budget for climate action not part of LG base tax funding; funding from higher levels of gov't sporadic and often unaligned with LG priorities; LG tends to act when gov't funds become available.	Limited budget available (to leverage external climate funds) for climate initiatives in climate-relevant dept's; LG very sensitive to provincial / federal funding, but this is rarely aligned with LG goals.	Climate action' is line item in all dept'l base budgets and budgets for outside climate expertise available. Senior gov't funding programs aligned with each other and with LG needs and vice versa.
	Senior government policy framework is missing or misaligned with LG priorities; senior gov't policy related to energy generation and supply contradicts local climate priorities.	Policy frameworks at prov'l and federal levels incomplete; incentives rarely align due to jurisdictional conflicts, funding cycles. LG climate policies able to exist, but not thrive.	Appropriate devolution of authority with stable funding / capacity; an enabling policy framework exists resulting in linked up policy across all levels of government; two-way learning possible.

Table 4: Feedback & Evaluation, Dissemination, and GHG Emission Reductions

Local Governement Climate Action Indicator Framework Indicators Incremental Actions Transitional Actions Transformative Actions				
Indicators Feedback & Evaluation	Incremental Actions	Transitional Actions	Transformative Actions	
1. Outcome measurement				
Outcome measurement				
Description: Are there metrics in place for				
measuring community GHG emissions? Is the				
status of climate policy outcomes measured,				
monitored, evaluated, and reported? The				
OECD has concluded that LGs are often				
unable to tie quantifiable mitigation targets with				
large-scale applications of energy efficient				
buildings, building retrofits, renewable				
energies, and transit-oriented development.			Metrics agreed upon; these	
Thus there is a critical need for fine-grained		Community GHG emissions inventory	monitored and reported on regularly;	
ways to measure the impact of policy		(infrequently) available and at a level of	emission inventories are	
interventions and to identify and quantify the	No metrics identified, and hence policy	aggregation that fails to permit objective	disaggregated sufficiently to permit	
co-benefits of acting.	impacts left unmeasured.	policy evaluation.	fine-grained policy evaluations.	
2. Performance monitoring and evaluation				
Description: How is the ongoing policy				
performance measured, and to what extent is				
this measurement linked to mitigation targets?	No quantifiable metrics to measure	Qualitative policy performance metrics	Evaluation / reporting req'ts on	
To what degree is the performance of plans,	policy performance or recommend	available but not linked to GHG	performance established; progress to	
strategies and actions achieving emissions	policy adjustments; irregular	reductions. Inventories more frequent &	target and deadlines reported	
reduction targets and delivering climate	inventories available to provide	fine-grained allowing for more frequent	regularly; quantifiable measurements	
benefits?	distance to emissions reduction target.	policy adjustments.	linked to implementatin of policies.	
3. Indicators				
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Description: Has the LG developed locally				
relevant indicators to measure climate			LG does CARIP reporting and has	
progress? If so, to what degree are they			developed clear set of climate	
measured, evaluated, and reported on?			indicators; these are monitored,	
Indicators that are relevant to other local		LG does CARIP reporting and undertakes	measured and reported on annually,	
governments can be scaled and used to		own community GHG inventory to help	and results fed into policy review	
increase dissemination.  Dissemination	and the provincial CEEI, exist.	assess climate progress.	processes.	
1. Information sharing / learning				
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Description: How active is the LG in networks				
of best practise, experience sharing, peer-to-				
peer exchanges, or learning? Participating in				
these networks can inform senior levels of government that LGs are particularly				
vulnerable to climate risks, and that they have				
a key role to play in climate action. Through				
participation with other LGs facing the same			All dept's actively engaged in	
challenges, capacity gaps can be filled and	Information silos exist with little sharing	Climate knowledge found beyond climate /		
risks can be reduced. Social learning is	between dept's or with / between	sustianbility staff in other dept's as sharing		
another key outcome of existing and new	external networks / experts. Learning	/ dissemination encouraged. Best practice	practice high among staff; climate	
networks, and can lead to social practise	limited to formal staff training, and	networks referenced by staff in policy	principles well embedded in dept	
changes.	informal exchanges neighbouring LGs.	development process.	mandates.	
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Sharing networks - Policy & Research				
To what degree is the LC anguaged in least				
To what degree is the LG engaged in local, regional, provincial, national, or transnational				
networks of climate best practise, as well as in				
research/advocacy groups that are comprised				
of experts, non-experts, business groups,				
NGOs, etc? Networks such as these help to			LG is member of several networks	
ensure that lessons learned and best practice	LG relies on existing thematic networks	LG is member of one network dedicated	(at various geog scales); uses these	
are widely disseminated. Networks can also	(e.g. waste, water, parks, development,	to exchange of climate-related best	to learn best practice and	
inform senior levels of government in more	etc.) to share and receive climate-	practice. This information is used by the	disseminate local lessons learned; all	
diverse ways than individual local	related best practice advice /	environment or sustainability department	climate-relevant dep'ts engaged in	
governments.	information.	only.	process.	
GHG Emission Reductions				
Corporate emissions target				

Description: Does the LG have a corporate GHG emissions reduction target? An emission target confirms that an LG understands their contribution to climate change, and it also provides an objective point towards which actions / policies can work.	No corporate target for energy or emissions; corporate carbon neutrality target under Climate Action Charter.	Target set, at least in line with percentages, baseline and dates outlined in Provincial targets (e.g. 30% by 2020, 80% by 2050, below 2007 levels). Carbon neutral target set (via offsets).	Energy target set (100% renewables for city operations by 2030) as well as carbon neutral operations (predominantly via internal reductions, renewables and fuel switching).
Absolute change in corporate GHGs (between years 2010 and 2015)			
Description: Depending on corresponding growth in service levels, this measure gives an indication of the global emissions impact of a LG over a given period of time. It is critically important to set boundaries to determine what emissions are to be counted in total, with international protocols (e.g. WRI/WBCSD Greenhouse Gas Protocol) being an example of a standardized, global approach to corporate emissions counting.	X is less than 5% reduction	X is greater than 5%, less than 10%	X is greater than 10%
3. % change in per capita emissions (between years 2010 and 2015)			
Description: This indicator gives a formula for dividing corporate emissions by population, in order to normalize emission reduction data and give a single intensity measure. It can also			
identify the efficiencies gained.	X is less than 5% reduction	X is greater than 5%, less than 10%	X is greater than 10%