#15: What can cities learn from the current crisis to build more sustainable and resilient food systems?
Thursday, 18 June, 2020
08.30 AM EST – 08.30 PM Singapore time

“Robust agri-food systems for a resilient recovery: Quito’s experience”
David Jácome-Polit, Metropolitan Director of Resilience Municipality of Quito

Note the presentations are organized for the purpose of knowledge sharing and do not necessarily represent the views of the organizers
**Confirmed cases**

**Guayas**
- # Houses in risk: 392
- % access to PSS: 0.3%
- % single mothers: 17%
- % access to PS: 84.3%
- # Green space PP: 4 m²

**Pichincha**
- # Houses in risk: 882
- % access to PSS: 33.6%
- % single mothers: 17.5%
- % access to PS: 91%
- # Green space PP: 13 m²

**City: Quito**
- # Houses in risk: 1472
- % access to PSS: 29.1%
- % single mothers: 15.6%
- % access to PS: 85.6%
- # Green space PP: 2.1 m²

**Parishes most affected**

**Calderon (North)**
- # Houses in risk: 392
- % access to PSS: 0.3%
- % single mothers: 17%
- % access to PS: 84.3%
- # Green space PP: 4 m²

**Chillogallo (South)**
- # Houses in risk: 882
- % access to PSS: 33.6%
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- # Green space PP: 13 m²

**Guamani (South)**
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**Coronavirus impact on Quito, M. D.**

**Sources:**
- Ministry of Public Health
- Preliminary Resilience Assessment (INEC)

**Cases per parish**
- 200+
- 100+
Malfunctioning of the Agri-food System of Quito

Oferta pública y privada relacionada con el abastecimiento de alimentos

Agricultura Urbana Participativa (Agrupar)
- Huertos escolares
- Huertos urbanos

Pública
- Principales centros de abastecimiento (Mercados: Mayorista y San Roque)
- Mercados
- Mercados saludables

Privada
- Supermercados
- Tiendas

Puntos de venta de productos orgánicos
- Bioferias
- Ferias agroecológicas

Necesidades Básicas
- Insatisfechas

menos pobres
9% - 18.8%
19.8% - 38.9%
35.6% - 100%

más pobres

Prevalencia de la D.C.I en el DMQ
- 32.4% - 46.6%
- 20.7% - 32.3%
- 7.2% - 20.6%
- sin información

Fuente: Sistema de Información Metropolitana. CONAQUITO (Agrupar)
Datos de Población, Secretaría General de Planificación MODR.
Our process started in 2016...

- **2016**
  - Preliminary Resilience Assessment
  - Weak economy / Risk scenarios
  - Strengthen local economy (challenge)

- **2017**
  - Quito’s M.D. Resilience Strategy
  - Food Economy (opportunity)
  - EY’s Productive sectors assessment
  - Risk index of Quito (hazard, exposure, vulnerability)
  - Agri-food Letter signed
  - (24 org / 1.6k persons)

- **2018**
  - Agrifood Strategy of Quito
  - Integrate the AFS into city land use & development plans
  - Risk mitigation plan for the Quito-Region agri-food system
  - Neighborhoods development plans under a resilience lens
  - Program to reduce physical vulnerability of buildings

- **2019**
  - Agrifood Resilience Strategy of Quito
  - Better understanding of food insecurity
  - How the agri-food system works
  - Embed SAQ in PMDOT & PUGS
  - Eco-efficient production processes
  - Food clusters to spark innovation
  - Food hubs to manage the agri-food system
  - Food literacy strategy
  - Food circular economy

- **2020**
  - Launch...
  - Food hub study

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**CITiES on the FRONTLINE COVID-19**

**GLOBAL RESILIENT CITIES NETWORK**

**WORLD BANK GROUP**
Food is not accessible
- A family of 4 with an income of 1.6 UBS can’t cover the basic consumer goods

Food is not available
- The city is highly dependable (5% MDMQ, 15% Pichincha Province)
- Around 1,700 urban and peri-urban farms (80% are women)

Food is not adequate
- Important levels of obesity (around 60%) undernutrition in children (around 5%)
- Unsafe food offered (around 20% in public markets)

Food supply is not stable over time
- Lack of information on climate related events (specially slow onsets)
- Lack of information on food availability to sustain city

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Food insecurity analysis

Food is not accessible
- Economically
  - Less income
  - Higher prices
- Physically
  - Inadequate Urban Dev.

Food is not available
- Supply chain
  - Production
- Food donation
  - Food bank

Food is not adequate
- Urban farming
  - Pat. San José
- Deficient transp. system
- Citizen participation

Food supply is not stable over time
- Not adequately used
  - Deficiency on food provision during emergencies
- Inadequate biological use
- Lack of food management system

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Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. (FAO)

Good response to Coronavirus

Increased food insecurity by Coronavirus
Quito’s approach to increase food security and food resiliency

<table>
<thead>
<tr>
<th>Scales</th>
<th>production</th>
<th>transformation</th>
<th>distribution and sales</th>
<th>consumption</th>
<th>waste management</th>
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<tbody>
<tr>
<td>neighborhood</td>
<td>neighborhood</td>
<td>urban farming</td>
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<td>parishes</td>
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<td>neighborhood</td>
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<td>zonal</td>
<td>informality</td>
<td>agroproduction</td>
<td>human talent</td>
<td>active mobility</td>
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<td>metropolitan</td>
<td>transformation</td>
<td>land management</td>
<td>food cluster</td>
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<td>food cluster</td>
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<td>regional</td>
<td>Control</td>
<td>soil restoration</td>
<td>human talent</td>
<td>storing</td>
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<td>national</td>
<td>R&amp;D (SO)</td>
<td>human talent</td>
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<td>transfer station</td>
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<td>Control</td>
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**CITIES on the FRONTLINE COVID-19**
Quito’s answer to Coronavirus food provision related challenges

**Local food production**

1600 farms (organic, local):
- 1,35 Million Kgs (57% subsistence production, 43% sold)
- 11 Tons per week distributed per week

**Food distribution system**

- Food bank
  - Since the beginning of the emergency has distributed 236,769 kg of food to 113,569 vulnerable persons (May 24th)

**Urban farms**
- 1,35 Million Kgs
  - 57% subsistence production
  - 43% sold
- 11 Tons per week distributed per week
Quito’s answer to Coronavirus food provision related challenges

**Food offer**
- 1589 Public offer and small scale shops.
- 107 Private offer (markets and supermarkets).
- Vulnerable population.

<table>
<thead>
<tr>
<th>Parish with higher concentrations</th>
<th>Administrative zones with higher conc.</th>
<th># of people per group</th>
<th>Vulnerability and poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amaguaña 23.4%</td>
<td>Los Chillos 22.1%</td>
<td>Single moth. 58,231</td>
<td>Total 260,962</td>
</tr>
<tr>
<td>Conocoto 22.4%</td>
<td>Eugenio Espejo 16.2%</td>
<td>Migrants 52,900</td>
<td>Poor 21,399</td>
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<tr>
<td>San Bartolo 20.9%</td>
<td>Eloy Alfaro 16.0%</td>
<td>Disabled 40,059</td>
<td>Extreme Poor 7,307</td>
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<tr>
<td>Calderón 20.4%</td>
<td>Manuela Sáenz 13.9%</td>
<td>Elders 109,771</td>
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<tr>
<td>Chillogallo 19.6%</td>
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<td>Total</td>
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# of people per group
- Poor 21,399
- Extreme Poor 7,307
- Total 260,962
Neighborhood leaders are key

- They know better who needs more assistance
- They help to quantify in an exact way the help needed
- They identify other special needs, such as non Spanish speaking people
- They help organize assistance provided inside the neighborhood
- They communicate inwards efforts coming from outside neighborhoods
### What needs to be improved

<table>
<thead>
<tr>
<th>What needs to be improved</th>
<th>What works and can work</th>
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<tbody>
<tr>
<td>Better coordination between different levels of government</td>
<td>Reach out the most needed and make sure no one is left behind</td>
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<td>Better coordination between municipal agencies</td>
<td>Building social support and trust to voluntarily comply with the required measures</td>
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<td>Better coordination with other stakeholders</td>
<td>Test in place regulations for risk response and fine tune actions</td>
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<td>Adjust interventions in the territory as the project is implemented</td>
<td>Be better prepared to implement recovery programs after the pandemic</td>
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<tr>
<td>Not every neighbourhood or leaders are equally prepared to cooperate</td>
<td>Be better prepared to face other different challenges in the future</td>
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### What we learned: From theory to practice

- **Systems thinking is critical to address complex challenges** (Arnold & Wade, 2015)
  - Although cities are perhaps the most complex and turbulent of all human systems, they need to be planned or managed as such to meet certain goals or targets (see Wiener, 1948).

- **Resilience is recognized as a property of a complex system** (Martin-Breen & Anderies, 2011 and Kupers, 2014).
  - If the resilience of a system depends on how well the system works before a crisis (Martin-Breen & Anderies, 2011), then systems thinking is critical for both:
    1. To provide better livelihoods and quality of life to their citizens, which requires a balance between economic prosperity and social inclusion without crossing “planetary boundaries within which we expect that humanity can operate safely” (Rockström et al, 2009), that is sustainable development
    2. To prepare for and to overcome events that may threaten the safety of people and/or the continuity of the city’s different functions and services, that is resilience capacity (Fiksel et al, 2014)

### Our team:
- Alexandra Rodríguez
- Alain Santandreu
- Denisse Paredes
- Natali Pinto
- Paola Ramón
- Paulina Cubillo
- Ana María Rosero
- Klelia Guerrero
- And everyone in planning and in the territory…

### Partners:

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**Thanks**
CITIES on the FRONTLINE

Coronavirus Speaker Series:
Sharing Knowledge to Respond with Resilience