WATER GOVERNANCE REFORM IN THE CONTEXT OF INEQUALITY:

Securing rights or legitimizing dispossession?

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The growing importance of irrigation in the context of climate change and socially & environmentally concerned markets

*Climate change:*

→ more variable & less predictable rainfall patterns
→ food *in*security at sub-national & national levels
→ supplemental irrigation estimated to increase production by 43% on average in developing countries; in southern Africa up by 300%
The growing importance of irrigation in the context of climate change and socially & environmentally concerned markets

**Socially & environmentally concerned markets:**

- preoccupied with social & environmental footprints of production, including of irrigation
  - sugarcane for biofuel or tobacco for cigars at the expense of water for domestic consumption or at the expense of food security?
  - irrigation at the expense of the environment?

→ emerging conditions & standards
  → to obtain financial capital e.g. from IFC (e.g. for sugarcane expansion)
  → to sell in specific markets (coffee, tobacco…)
  → to join the e.g. UN Global Compact (CEO Water Mandate)
The territorial dimension of irrigation – more than topography

11,600+ farms with irrigation
- 75% with irrigated area <3 ha
- 64% located in sloping areas

78,400+ hectares under irrigation
- 81% at farms with irrigated area >20 ha
- 85% located in relatively flat areas
The territorial dimension of irrigation — *land-based inequality*
Water governance reform
– a new water rights regime

- General Water Law (2007)
- National Water Authority (ANA) (2010)
- all water use should be authorized in order to ensure
  - sustainable & equitable use of water and the conservation of the country’s water resources in terms of quantity & quality, and
  - enable the effective exercise of rights to access water
Water governance reform
– a new water rights regime, also for irrigation

<table>
<thead>
<tr>
<th>Concession (ANA)</th>
<th>Authorization (districts with cooperation agreement)</th>
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</thead>
<tbody>
<tr>
<td>Law (2007):</td>
<td></td>
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<tr>
<td>• Irrigated area &gt; 20 ha</td>
<td>• Irrigated area &lt; 3 ha</td>
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<tr>
<td>Regulation (2010):</td>
<td></td>
</tr>
<tr>
<td>• Farm &gt;70 ha or produce for industrial market</td>
<td>• Farm &lt;70 ha &amp; produce not for industrial market</td>
</tr>
</tbody>
</table>

Ranks in terms of priority different water use types (domestic; livestock; irrigation; etc.)
A short note on methodology

- systematic review of the Nicaraguan Gazette (available online) in order to
  - identify administrative resolutions published by the National Water Authority (2011-2015)
  - characterize & introduce these into a database
- archival research at the National Water Authority
- interviews conducted over a 10 year+ period
Progress by end-2015:

- **433 administrative resolutions** (85% published in National Gazette) of which
  - 120 are concessions of water use rights for irrigation
- no cooperation agreements made with districts →
  - no authorizations for small-scale irrigation
...regulating water use or providing legalization services?

<table>
<thead>
<tr>
<th>Criteria</th>
<th>According to 2007 water law</th>
<th>According to 2010 water law regulation</th>
<th>All</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Irrigated area</td>
<td>Farm area</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 20 ha</td>
<td>&lt;= 70 ha</td>
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<tr>
<td></td>
<td>&lt;= 3 ha</td>
<td>&lt;= 70 ha</td>
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</tr>
<tr>
<td></td>
<td>3-20 ha</td>
<td>&lt;= 70 ha</td>
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<td>Produce destination</td>
<td>-</td>
<td>N.A.</td>
<td></td>
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<tr>
<td></td>
<td>-</td>
<td>Own consumption</td>
<td></td>
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<tr>
<td></td>
<td>-</td>
<td>Unclear</td>
<td></td>
</tr>
<tr>
<td>Type of legal requirement</td>
<td>Concession</td>
<td>Concession</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Authorization</td>
<td>Authorization</td>
<td></td>
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<tr>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td># farms</td>
<td>381</td>
<td>1,166</td>
<td>6,911</td>
</tr>
<tr>
<td></td>
<td>8,700</td>
<td>3,522</td>
<td>11,599</td>
</tr>
<tr>
<td>Irrigated area (ha) [%]</td>
<td>63,302 [79%]</td>
<td>2,775 [4%]</td>
<td>13,723[18%]</td>
</tr>
<tr>
<td></td>
<td>7,592</td>
<td>13,723 [100%]</td>
<td></td>
</tr>
<tr>
<td>Concessions (120) as % of # farms</td>
<td>31%</td>
<td>10%</td>
<td>1%</td>
</tr>
<tr>
<td>Concessions as % of water withdrawn for irrigation</td>
<td></td>
<td></td>
<td>33%</td>
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</tbody>
</table>
Implications for water (in)security

→ territories of water insecurity due to legal invisibility → lack of rights

→ territories of limited economic opportunities due to inability to demonstrate legal water access

→ reinforces existing inequalities
  → at national level
  → at sub-national level
The importance of implementation

- limited staff (max 15 technical staff) – trivial, but
  - a precondition to be taken into account and/or a political choice
- reluctance to delegate → concessions before cooperation agreements
- limited operational resources → e.g. hydrological studies conducted by applicants rather than as independent studies
  → water security = a new dimension of inequality
- powerful applicants in need of a legal service – a potential for success but also a caveat (jeopardizes regulation)
- unfortunate mix of formalization & water tariff introduction
  - powerful applicants in a position to influence water tariff decisions
  - less powerful applicants seek to ‘go below the radar’, but thereby risk losing rights
Thank you for listening!

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