Flooding rangelands for fodder production in Somaliland
Somali lands

FIGURE 1.1
Area equipped for spate irrigation in selected countries (FAO-AQUASTAT, 2010)

<table>
<thead>
<tr>
<th>Country</th>
<th>1 000 hectares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan</td>
<td>700</td>
</tr>
<tr>
<td>Yemen</td>
<td>200</td>
</tr>
<tr>
<td>Somalia</td>
<td>150</td>
</tr>
<tr>
<td>Sudan</td>
<td>100</td>
</tr>
<tr>
<td>Algeria</td>
<td>50</td>
</tr>
<tr>
<td>Mongolia</td>
<td>20</td>
</tr>
<tr>
<td>Myanmar</td>
<td>10</td>
</tr>
<tr>
<td>Tunisia</td>
<td>5</td>
</tr>
<tr>
<td>Morocco</td>
<td>10</td>
</tr>
<tr>
<td>Eritrea</td>
<td>5</td>
</tr>
</tbody>
</table>

1 000 hectares
FIGURE 1.2
Spate irrigation as a percentage of total irrigation in selected countries
(FAO-AQUASTAT, 2010)

- Eritrea
- Somalia
- Yemen
- Mongolia
- Algeria
- Sudan
- Tunisia
- Pakistan
- Morocco
- Myanmar

Percentage

0  23  45  68  90
In the Tug Der/Nugal drainage basin, some surface water records are available for Tug Der at Burao for six years during 1945 to 1950.

During this period, an average of about 33 spates was recorded per year. About 85% of these occurred during the five months from May to September. It is estimated that an average runoff of

33 million m³ (MCM) per year,

equivalent to about 22 mm in the 1500 km² catchment, occurs in the area (runoff coefficient of 0.06) (Kammer, 1989). The total catchment area of the drainage basin (Tog Dheer and Nugaal catchments) is about 112,231 km².
Map Showing on Spate Irrigation Canals in Beer Village

CANAL 5 (Wadzmi)
Length: 1.56km

CANAL 6 (Labibulsho)
Length: 0.97km

CANAL 7 (Cazbi)
Length: 1.32km

CANAL 8 (Libatnay)
Length: 3.93km

CANAL 9 (Dhoolayer)
Length: 0.98km

CANAL 10 (Hassan Banatane)
Length: 0.72km

CANAL 11 (Odayasun)

CANAL 12 (Asf Ave)
Length: 0.56km

CANAL 13 (Right Jabatane)
Length: 0.82km

Image © 2018 Digital Globe

Google Earth
Field Improvement
Problem statement

- Previous farmer generation are no more active in farming;
- New farmer generation has lost the indigenous farming knowledge which comprises cereal production, pastoralism, livestock and other income sources;
- People are striving to restore the indigenous farming system which was badly damaged during the disturbance periods of war, i.e. lack of repair and maintenance of spate structure, abandoning of old wells and water ponds and other water resources.
Solution

- Flooding the open fields and using them for forage production does not require ploughing and other activities as compared to crop husbandry practices;
- This takes place in the Beer, Oodweyne and other districts;
- Farmers get between US $ 450 to 500 per hectare from grass production annually.
The bulk of this fodder crop is cut and dried and then sold to traders who sell it at Berbera port where 1.5 million heads of livestock are exported to Saudi Arabia and other Middle East markets.
Grass types (1)

- *Cenchrus ciliaris* (commonly called African fox-tail grass or buffel grass).
- Only encountered senior farmers. Not many young farmers.
Grass types (2)

- *Eragrostis superba* (common name- Masai lovegrass)
Negative consequences

- One gets cash from grass production on the cost of loosing cereal production from the same field (crises of grains of staple food);
- Invasion of unwanted vegetation within the fields and encroachment of mesquite on the surrounding of these fodder fields.
However

- There is high potential to divert water from many spate rivers to new rangelands for fodder production.
Recommendations

- Land use planning at institutional level with support provided at policy level.
- New spate projects for fodder production and rangelands development. This also covers the fuel wood production, supply of medicinal plants, wildlife, biodiversity, non timber forest products such as gum, honey and others things.
- Groundwater recharge by minimum financial investment of government and donors.
Community Consultation