Grain-size dependent tidal inlet sediment bypassing

Contradictory schemes of tidal inlet sediment bypassing are explained by modelled residual transport patterns of distinct grain-size fractions

Contradictory schemes of tidal inlet sediment bypassing:
A: Bruun & Gerritsen (1959)
B: e.g. Son et al. (2010)
C: Gaye & Walther (1935)

Herrling & Winter (Coast. Eng., 2018)
Ratio of bypassed to recirculated sand volumes

Recirculation becomes more dominant with increasing grain-size

<table>
<thead>
<tr>
<th>Bypassed/recirculated</th>
<th>Total sand</th>
<th>125 µm</th>
<th>250 µm</th>
<th>375 µm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumer Ee</td>
<td>2.0</td>
<td>4.5</td>
<td>0.8</td>
<td>0.5</td>
</tr>
<tr>
<td>Otzumer Balje</td>
<td>1.9</td>
<td>11.5</td>
<td>0.8</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Herrling & Winter (Coast. Eng., 2018)