Ecological and Economic Recovery in Kazakhstan’s Northern Aral Sea Region

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Related Literature


“The Aral Sea tragedy provides the most striking example of the interconnections between the health of an ecosystem and that of the economy, community, and people dependent on that ecosystem.”

Postel, 2000, p. 943
Recent Headlines

Symphony for the return of the Aral Sea
Wester, T. 2014. *The Moscow Times*
http://www.themoscowtimes.com/article/497088.html

Aral Sea Reborn
Al Jazeera. 2013. *Al Jazeera Earthrise*
http://www.aljazeera.com/programmes/earthrise/2012/07/201271912543306106.html

Aral Sea Recovery?
Walters, P. 2010. *National Geographic*

Return of the Aral Sea
Conant, E. 2006. *Discover Magazine*
http://discovermagazine.com/2006/sep/returnaralsea
* Both are Moderate Resolution Imaging Spectroradiometer (MODIS) images captured aboard NASA’s Terra satellite. The image on the left was captured on August 19, 2000, while the image on the right was captured on August 16, 2018. Both show the approximate extent, outlined in gold, of the Aral Sea in 1960. Source: NASA Earth Observatory
Ak-espe, Kazakhstan
between Ak-basty and Kulandy, Kazakhstan

Photo by Kristopher White
Karateren, Kazakhstan

Photo by Kristopher White
Near Tastubek, Kazakhstan

Photo by Kristopher White
Barsakelmes

Photo by Kristopher White
Кокард — фасыр жобасы

Photo by Kristopher White
Near Tastubek, Kazakhstan
## Northern Aral Sea (NAS) Fish Harvests, 2005-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Harvest *</th>
<th>Flounder</th>
<th>Carp</th>
<th>Bream</th>
<th>Pike-perch</th>
<th>Roach</th>
<th>Asp</th>
<th>Saberfish</th>
<th>Rudd</th>
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<tbody>
<tr>
<td>2005</td>
<td>695</td>
<td>303</td>
<td>181</td>
<td>57</td>
<td>30</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>2006</td>
<td>1,360</td>
<td>700</td>
<td>190</td>
<td>120</td>
<td>70</td>
<td>250</td>
<td>30</td>
<td>-</td>
<td>-</td>
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<tr>
<td>2007</td>
<td>1,910</td>
<td>640</td>
<td>260</td>
<td>410</td>
<td>110</td>
<td>370</td>
<td>80</td>
<td>40</td>
<td>-</td>
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<tr>
<td>2008</td>
<td>1,490</td>
<td>410</td>
<td>170</td>
<td>360</td>
<td>120</td>
<td>340</td>
<td>90</td>
<td>-</td>
<td>-</td>
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<tr>
<td>2009</td>
<td>1,885</td>
<td>615</td>
<td>125</td>
<td>470</td>
<td>185</td>
<td>410</td>
<td>80</td>
<td>-</td>
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<tr>
<td>2010</td>
<td>2,810</td>
<td>715</td>
<td>115</td>
<td>835</td>
<td>245</td>
<td>765</td>
<td>70</td>
<td>65</td>
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<tr>
<td>2011</td>
<td>3,520</td>
<td>710</td>
<td>70</td>
<td>773</td>
<td>365</td>
<td>1,040</td>
<td>65</td>
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<td>2012</td>
<td>3,176</td>
<td>511</td>
<td>82</td>
<td>1,229</td>
<td>392</td>
<td>774</td>
<td>87</td>
<td>101</td>
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<td>2013</td>
<td>4,510</td>
<td>720</td>
<td>104</td>
<td>1,639</td>
<td>648</td>
<td>1,100</td>
<td>162</td>
<td>32</td>
<td>24</td>
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<td>2014</td>
<td>4,674</td>
<td>177</td>
<td>80</td>
<td>1,836</td>
<td>809</td>
<td>1,292</td>
<td>138</td>
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<td>93</td>
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<tr>
<td>2015</td>
<td>6,070</td>
<td>35</td>
<td>138</td>
<td>2,439</td>
<td>1,020</td>
<td>1,925</td>
<td>170</td>
<td>142</td>
<td>81</td>
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<tr>
<td>2016</td>
<td>6,000</td>
<td>25</td>
<td>108</td>
<td>2,456</td>
<td>973</td>
<td>1,913</td>
<td>123</td>
<td>160</td>
<td>114</td>
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</table>

* All fish harvest figures in metric tons. Data source: Unpublished, Kazakhstan Research Institute of Fisheries, Aralsk branch.
Pike-perch (судак)
“Қазақстан - 2050” стратегиясы
ДАМУДЫҢ ДАНҒЫЛ ЖОЛЫ

Photo by Kristopher White
The dam and stabilization of the NAS has “improved our socio-economic level, especially for people who were once left without work, without the sea, without hope. And the fact that the sea has come back and with the development of the fishery, these people started to earn money, build houses, buy cars, educate their children, believe in the future.”

Zauresh Alimbetova, Director Barsa-Kelmes Nature Reserve

“The image of fishing villages has greatly changed. Now a lot of large houses are being built. Every fisherman has 2-3 cars. The standard of living of Aral fishermen has increased dramatically. It (the recent increase in fish harvests) has had a strong impact.”

Zaulkhan Ermakhanov, Director Kazakhstan Institute of Fisheries, Aralsk branch

“The population is increasing. Things are improving. There are new roads, a road is being built connecting China with Europe. And the number of cars has increased in Aralsk. So we have the feeling that the situation in Aralsk is very good compared with before. The fishing industry is growing, improving so I think and hope that it will continue to improve. Fishing industry and increases in construction provide hope for the future.”

Yedige, Aralsk resident

“The main source of living in our region was the sea. So of course today the living conditions have improved. In the last 4-5 years there have been positive changes throughout the region. From ecology to economy.”

Ainagul Baimakhanova, Director Aral Tenizi NGO
Aralsk, Kazakhstan

Photo by Kristopher White