

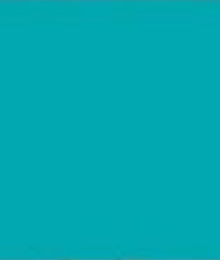


# The Second Assessment of Transboundary Rivers, Lakes and Groundwaters - the Caucasus Sub- Region

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# Process of assessing the Caucasus

- 8-10 December 2009: subregional workshop on transboundary water management in the Caucasus (Tbilisi, Georgia)
- February-April: Caucasus countries return completed datasheets to UNECE, the secretariat sent to Caucasus countries draft assessments, comments from the countries to draft assessments
- 5-7 July: Review of the Caucasus assessment by the Working Group on Monitoring and Assessment
- Comments from AM, AZ, GE, TR, Ramsar added





# Kura and tributaries

| <b>Basin/sub-basin</b>                | <b>Input received</b> |
|---------------------------------------|-----------------------|
| Kura (AM, AZ, GE, IR, TR)             | AZ, GE, TR, AM, (IR)  |
| Iori (AZ, GE)                         | GE, AZ                |
| Alazani (AZ, GE)                      | AZ, GE                |
| Ktsia/Khrami (GE, AM)                 | GE, AZ                |
| Debed (AM, GE)                        | AM, GE                |
| Agstev (AM, AZ)                       | AM, AZ                |
| Lake Jandari (GE, AZ)                 | GE, AZ?               |
| Potskhovi/Posov (GE, TR)              | GE, TR                |
| Kartsakhi Lake/Aktaş Gölü<br>(GE, TR) | GE, TR                |

# Araks/Aras and tributaries

| <b>Basin/sub-basin</b>                      | <b>Input received</b> |
|---|-----------------------|
| Araks/Aras (AM, AZ, IR, TR)                 | AM, IR, TR, AZ        |
| Akhuryan (AM, TR)                           | AM, TR                |
| Akhuryan/Arpaçay dam and reservoir (AM, TR) | AM, TR                |
| Arpa (AM, AZ)                               | AM, AZ                |
| Vorotan (AM, AZ)                            | AM, AZ                |
| Voghji (AM, AZ)                             | AM, AZ                |
| Sarisu (TR, IR)                             | TR, IR (message)      |

# Other rivers of the Caucasus

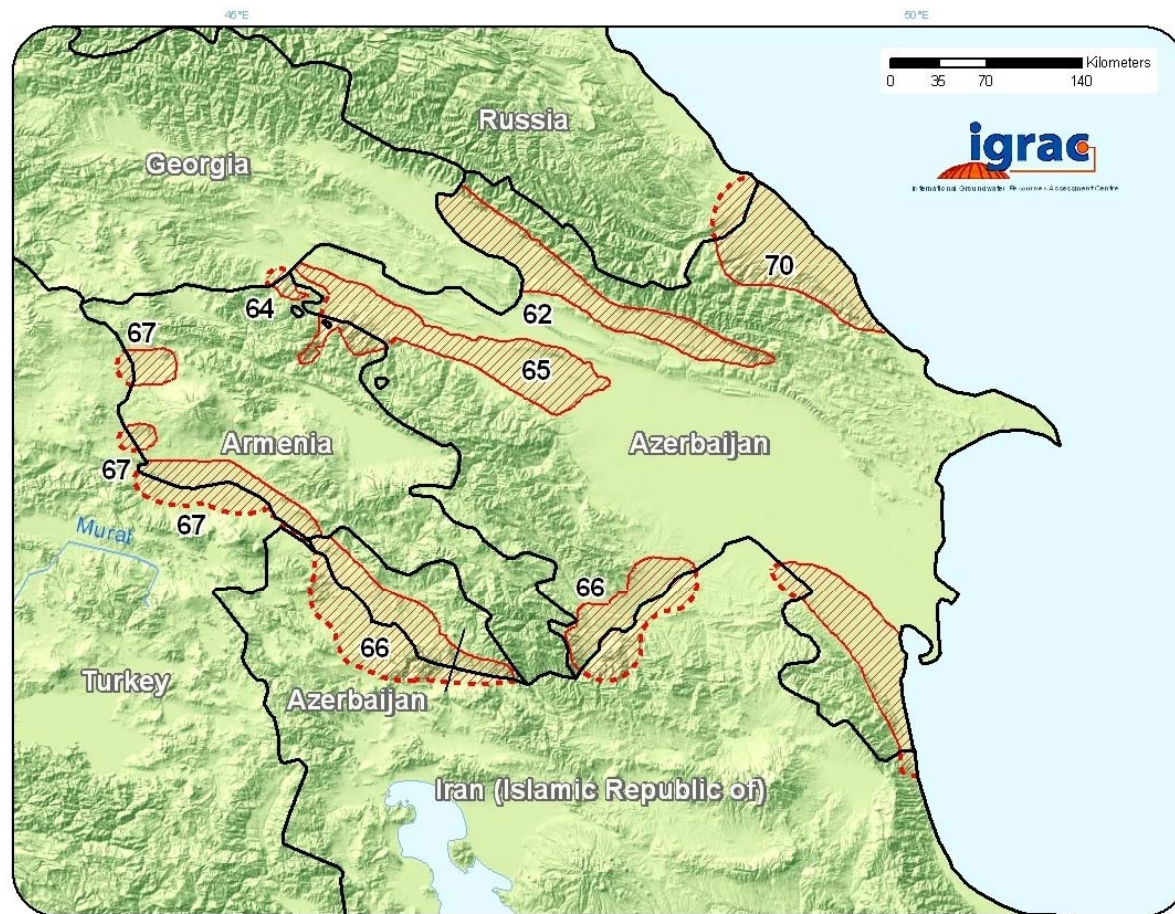
| <b>Basin/sub-basin</b>   | <b>Input received</b> |
|--|-----------------------|
| Samur (AZ, RU)   | RU, AZ                |
| Sulak and transboundary tributary<br>Andis-Koisu (GE, RU)              | GE, RU                |
| Terek (GE, RU)   | GE, RU                |
| Psou (RU, GE)  | GE, RU                |
| Chorokhi/Coruh and transboundary<br>tributary Machakheliskali (GE, TR) | GE, TR                |

Ramsar Sites/wetlands of international importance: 1) Wetlands of Javakheti region and 2) Floodplain marshes and fish ponds in the Araks/Aras river valley

# Transboundary aquifers identified

| No. | Aquifer name                       | Countries | No. | Aquifer name                 | Countries |
|-----|------------------------------------|-----------|-----|------------------------------|-----------|
| 60  | Kura                               | GE-<br>AZ | 67  | Leninak-Shiraks              | AM-<br>TR |
| 61  | (no name)                          | GE-<br>AZ | 68  | Herher, Malishkin and Jermuk | AM-<br>AZ |
| 62  | Alazan-Agrichay                    | GE-<br>AZ | 69  | Vorotan-Akora                | AM-<br>AZ |
| 63  | Ktsia-Kharami                      | GE-<br>AZ | 70  | Samur                        | AZ-<br>RU |
| 64  | Debed                              | GE-<br>AM | 71  | Quaternary aquifer (name?)   | GE-<br>RU |
| 65  | Agslev-Akstafa/Tavush-Tovuz        | AM-<br>AZ | 72  | Quaternary aquifer (name?)   | GE-<br>RU |
| 66  | (Nakhichevan/Larijan and Djebrail) | AZ-IR     |     |                              |           |

# Transboundary aquifers



## Legend

### Transboundary Aquifers

- aquifer extent
- confirmed boundary
- approximate boundary

### Geographical elements

- political borders
- lakes
- rivers

### elevation



### Basemaps

Geographic features: ESRI data and maps (2006)  
Elevation: SRTM and GTOPO30 provided by ESRI (2006)

### Map projection

Robinson projection, geographic coordinates,  
spheroid WGS84, longitude of central meridian 0°.

### Cartographic editing GIS

C.M. van Kempen

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# General observations about the input received

- Input focused on technical information (discharges, water quality)
- very little information on the management response
- Climate change information very scarce
- Gaps in groundwater information



# Changes since WGMA-11: General

- AZ added Azerbaijani names of the rivers
- Some information previously in table format converted to text if too many gaps



# Substantial changes

- The largest protected areas in the Kura basin presented as a table
- Water resources and water use (to be shown as withdrawal) information for AM added (Kura)
- Iori: AZ added information – water resources, population, land use/land cover (LU/LC), withdrawal
- Debet: AM added - LU/LC, withdrawal; GE response (rehabilitation of irrigation systems); pesticides & erosion/sedimentation added to pressures

# Substantial changes

- Agstev: AM, AZ added LU/LC, AZ added TDS to the status information
- Lake Jandari: clarification from GE concerning direct wastewater discharges lacking
- Ramsar Sites (Javakheti Region wetlands & Flood-plain marshes and fishponds in the Araks/Aras River Valley): a few revisions
- Araks/Aras: AM - population & LU/LC added, a table added on heavy metal concentrations related to mine water discharges (some location information needed), AZ added a paragraph on wastewater pollution

# Substantial changes

- **Akhuryan Basin:** AM additions - population information added to Leninak-Shiraks aquifer, LU/LC
- **Samur,** addition: Agreement on joint use and protection of the transboundary Samur River signed between Azerbaijan and the Russian Federation 3 September 2010 (and entered into force 21 December 2010)

# Gaps that seem to remain

- No information from AZ concerning shared aquifers
- Names missing for the Quaternary aquifers shared GE (Sulak Basin etc)
- Some tables incomplete
- Kura Reservoir capacity table to be filled in (now information only from AZ & GE – probably incomplete)

# Still needed

- Harmonize the terminology (use → withdrawal)
- Complete the selection of graphics (AM, GE, RU have made some available)
- Checking the inventory of transboundary aquifers
- Aquifer delineations can be assumed ok (since no changes asked)?

# Proposed editorial changes – content

- Water resources per basin or by a country's territory in each basin to be compiled to a summary table or bar chart (currently in the body text; not expressive/meaningful for e.g. a policy-maker)
- Mention of national tributaries to be removed unless information related to transboundary impacts given
- If a comprehensive table or reservoirs can be compiled, mentions of reservoirs to be moved from the narrative text?



# Schedule for finalizing the assessment

Final comments to the secretariat  
**by 20 May 2011**

Condensing/shortening by the secretariat,  
linguistic editing, in June layout, to print  
18 July

