

DAMS IN ALBANIA

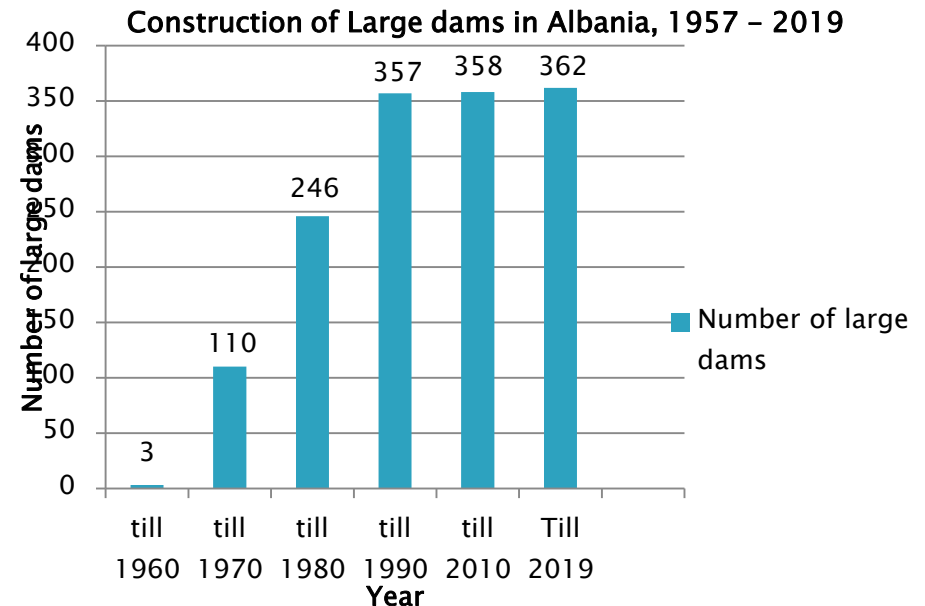
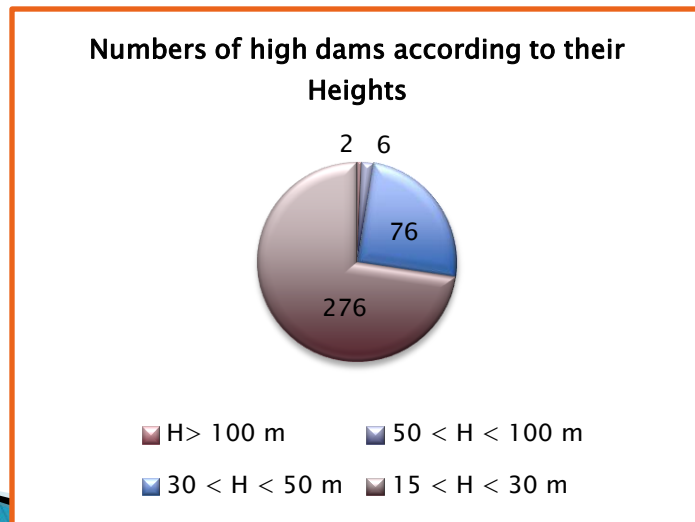


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1- GENERAL

- ▶ Albania is a rich country with water. The water catchment area is 43 305 km²
- ▶ There are 682 dam. 362 of them are large dams and 10 of them are very large dams with height more than 60 m.
- ▶ More than 345 large dams are used for Irrigation. 2 large dams are used for water supply and 15 of them are used for Hydroenergy.
- ▶ Very large dams has created 3 cascades on Drini, Devolli and Mati rivers



1- GENERAL

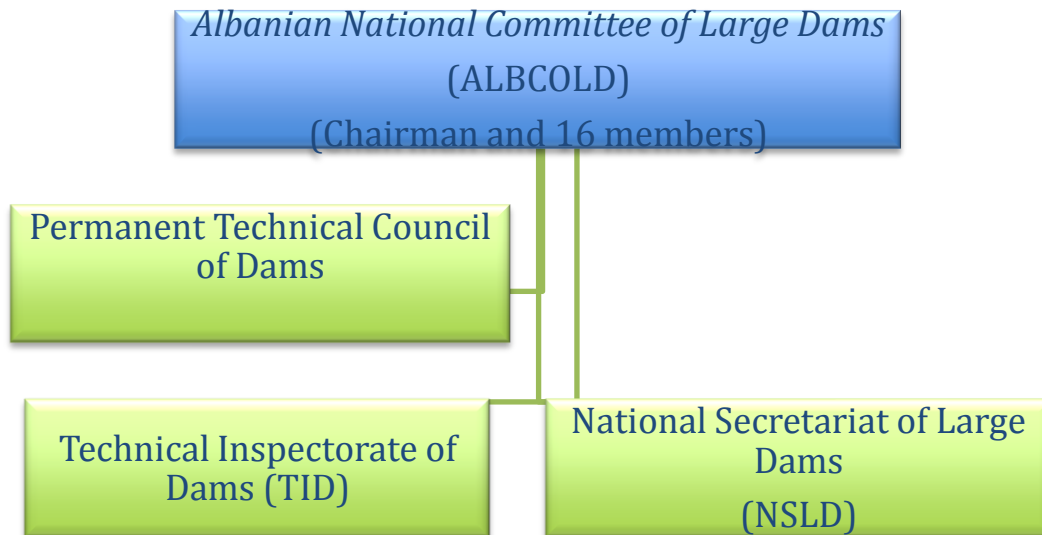
- ▶ The longest dam is Irrigation Dam of Thana with crest length of 3 800 ml
- ▶ The highest Dam is Fierza Dam on Drini River with Height of 166.5 m and Volume 8 million m³;
- ▶ The largest reservoir created by the construction of a Dam is Fierza Dam with storage volume of 2.35 billion m³
- ▶ The dams with highest risks are 5 dams on the Drini River.
- ▶ Heights, Location, and types of large dams, basins they created, installed power capacities and dynamic of utilization of HEPP's make Drini River cascade unique in Europe

2- LEGAL BASIS FOR DAM SAFETY IN ALBANIA

- ▶ Law No.8681, date 02.11.2000 for "Design, construction, operation and maintenance of dams", amended with law No. 18, date 14.02.2013.
- ▶ Law No.8756, date. 26.03.2001 for "Civil Emergency"
- ▶ DCM No.147, date 18.03.2004 for "Dam Safety Regulation".
- ▶ DCM, No.1108, date 30.12.2015 for « Transfer of Infrastructure of Irrigation Systems to Local Government »
- ▶ National Program in Water sector for period 2018 – 2030
- ▶ Recommendations of ICOLD given by Buletins

Albanian National Committee of Large Dams (ALBCOLD)

General Tasks of ALBCOLD



- ❑ To approve the projects of new dams
- ❑ To check the actual conditions and monitoring of existing dam
- ❑ To support the technical development for design, construction, operation and maintenance of large dams. To approve the criteria for design and construction of dams
- ❑ To inform the Council of Ministers for the actual situation of the dams
- ❑ To fulfill the obligations arising from its membership in ICOLD

3- DEVELOPMENTS AND INVESTMENTS FOR DAM SAFETY AND MONITORING 2013- 2017

- ▶ Rehabilitation of 5 highest dams and their downstreams in Drini Cascade
- ▶ Protection Measures against Erosion phenomena and sediments coming in three artificial lakes of Drini Cascade
- ▶ Preparation of new Hydrological model for Drini River Basin and Devolli River Basin.
- ▶ Providing of safe flood management and Increase of discharges capacities in Drini Cascade
- ▶ Rehabilitation of 20 large irrigation dams and their infrastructure
- ▶ Installation of Monitoring systems for 10 Hydroenergy Dams
- ▶ Implementation of new Bathymetry survey and preparation of new Volume Curves in largest artificial lakes for hydroenergy
- ▶ Risk Analyse Study and Preparation of Emergency plans for very large dams of Cascades.

3- DEVELOPMENTS AND INVESTMENTS FOR DAM SAFETY

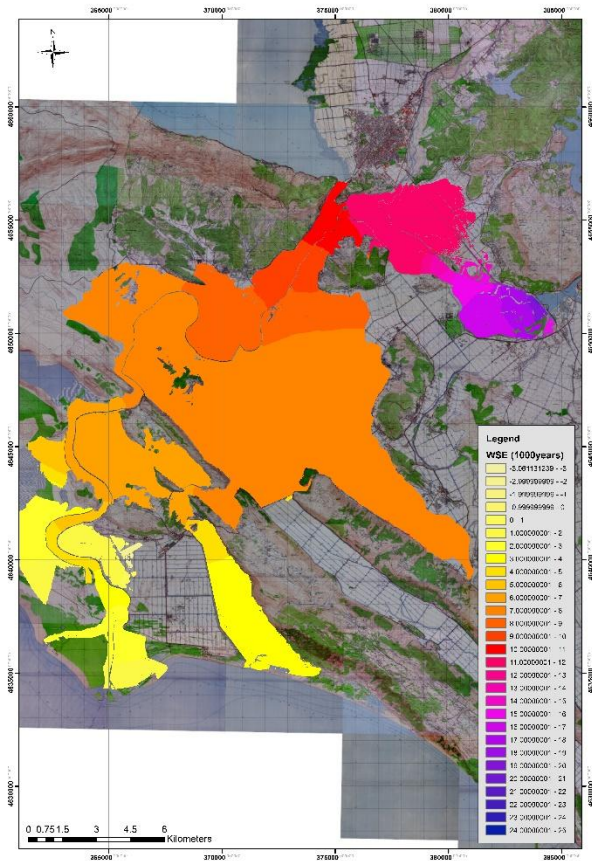


Komani Dam, 2010

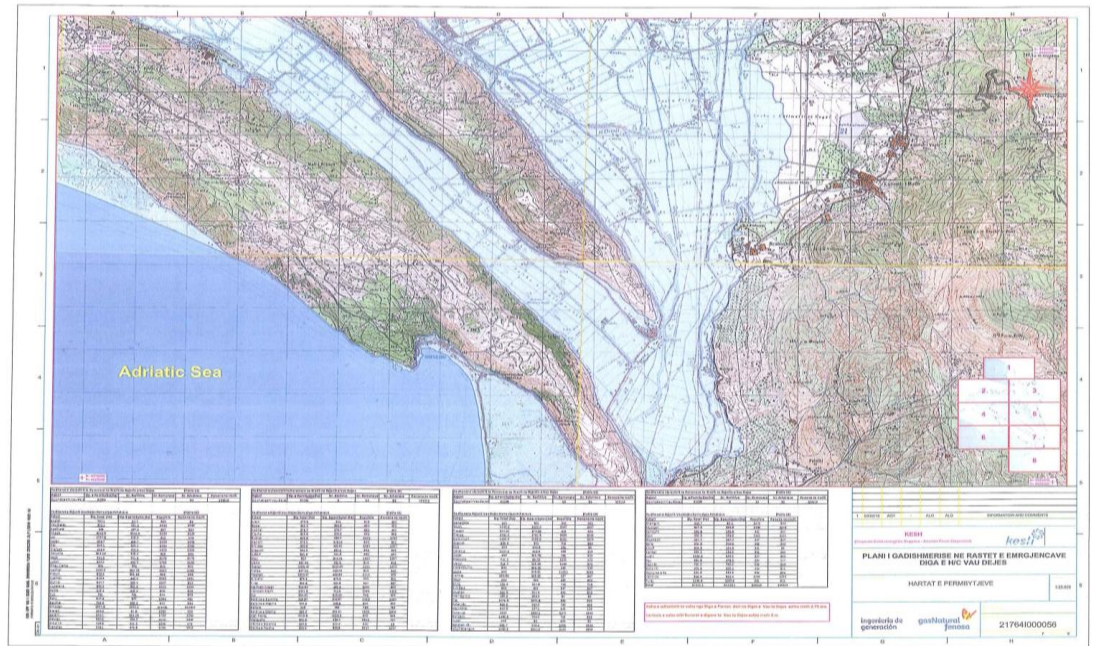


Komani Dam, 2016

Water Surface Elevation, Scenario 1 (S1), Flow 1'1000years



Flood Maps in downstream of Drini River



4- CONSTRUCTION OF NEW DAMS IN ALBANIA

- ▶ Construction of Moglica Dam on Devolli River with height $H = 166.5$ m. This is the first very large dam in Albania with asphalt diafragm. It will be the highest dam with asphalt diafragm in Europe;
- ▶ Construction of Fangu Dam on Fani River with Height $H = 92$ m. This dam is rockfill dam with concrete face;
- ▶ Construction of Okshtun Dam on Okshtuni river, branch Black Drini river with height $H = 64$ m. This is the first RCC large dam in Albania

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Moglica Dam, 2019

Banja Dam, 2016



4- CONSTRUCTION OF NEW DAMS IN ABANIA



Okshuni Dam, 2019

Okshuni Dam, 2018



5- Main Challenges in the Future

Referred the National Program of Water Sector, the main challenges in the future are:

- I. Updated and improvement of legal frameworks in dam safety sector
- II. Adaption of legal frameworks and Technical Standarts with EU Directives and ICOLD Recommendation
- III. Strengthening of management and Control and Monitoring institutions
- IV. Strengthening of Research and Development insitutions
- V. Modernization of Monitoring Systems of very large dams in Hydroenergy and installation of data transfer system in real time and online
- VI. Installation of Monitoring Systems and improvement of Monitoring process for Irrigation dams and their infrastructure
- VII. Preparation of Studies on Risk Analyses of large dams;
- VIII. Preperation and Implementation of new Emergenecy Plans for all very large dams with highest risks
- IX. Installation of Alarm system in Hydroenergy dams with high risks.
- X. Investments for Rehabilitation and Improvement of very large existing Dams.





HEPP of Vau i Dejes