WORLD WATER FORUM

INVESTING IN TRANSBOUNDARY BASIN MANAGEMENT, IT PAYS BACK: SUSTAINABLE FUNDING OF TBM AND COMMON INFRASTRUCTURES

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Summary

1. Missions and activities basins

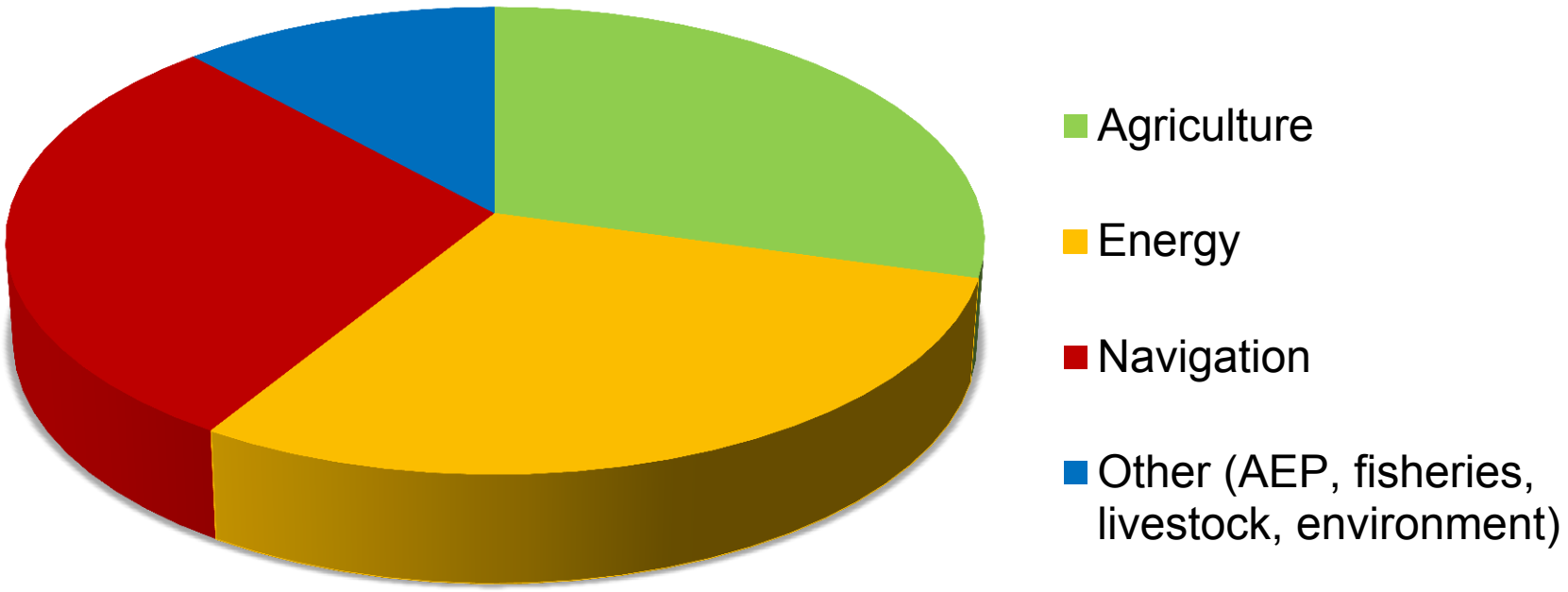
2. Exemple of OMVS

3. Challenges of investment

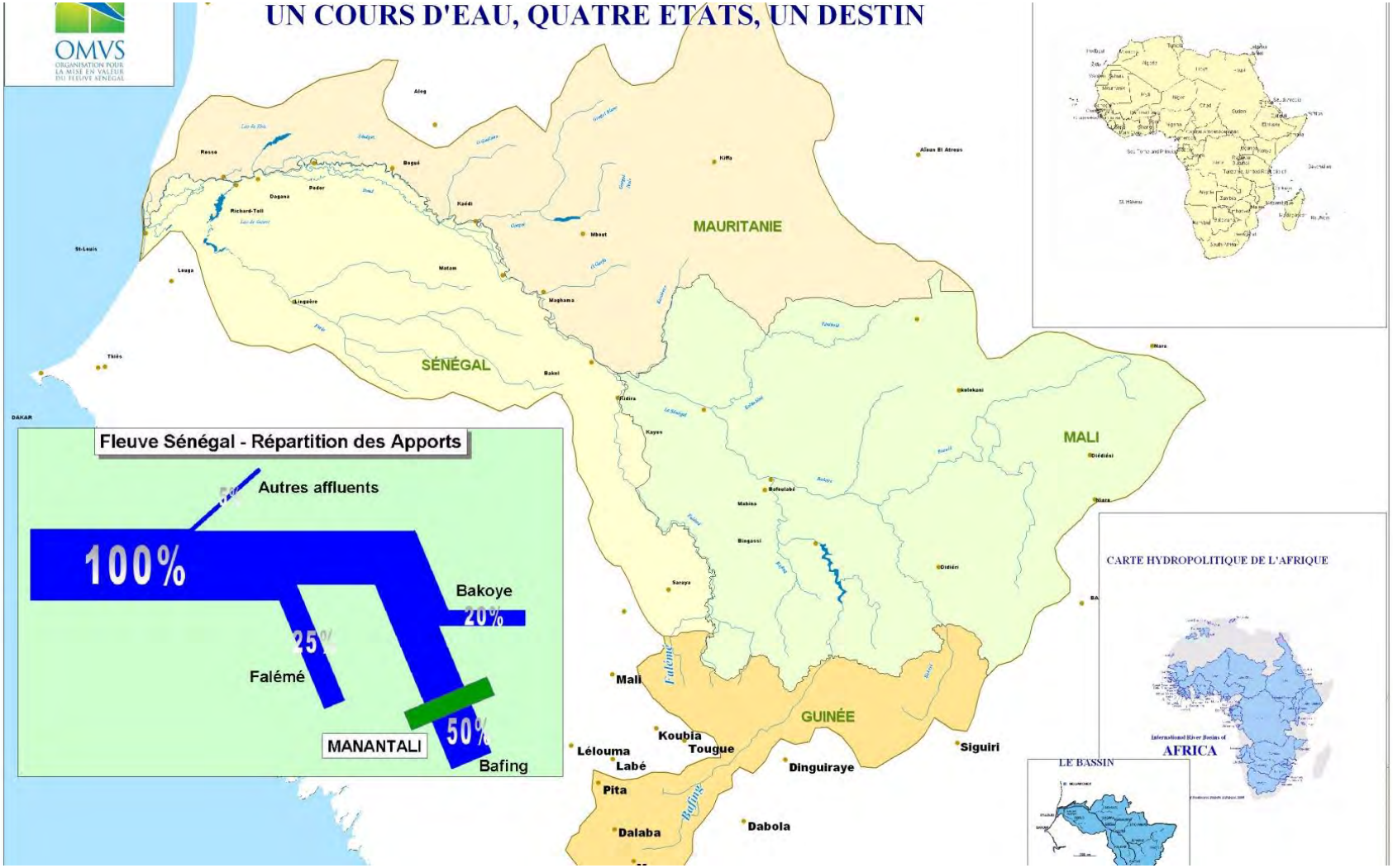
Missions and activities

- Economic Development and Integration through water uses
  - Agriculture
  - Hydropower
  - Navigation
  - Others

Water resources use Sectors



2. Exemple Of OMVS



Missions of OMVS

- Creation on March 11, 1972 of the OMVS River Basin Organization between Mali, Mauritania and Senegal but Guinea joined in on 17 March 2006
- Missions :
- **Ensure food security for basin populations;**
  - **Reduce OMVS' member states economic vulnerability against climatic risks and external factors;**
  - **Speed up economic development within the Member-states;**
  - **Preserve the balance of ecosystems within the Basin and in the sub-region;**
  - **Secure and improve the incomes of populations in the valley**

Specific features: Joint management, solidarity

- Joint management of the river basin
- Joint management of common infrastructures and assets
- Joint Investments
- Consensus-based decisions: no vote
- Inclusive programs that take account of the interests of countries upstream and downstream

Legal framework

- 2 conventions:
  - One signed on 21 December 1978 on the legal status of jointly-owned infrastructures built on the Senegal River(including dams and navigation structures) and some roads;
  - the other signed on 12 May 1982 on the financing modalities of such jointly-owned infrastructures.

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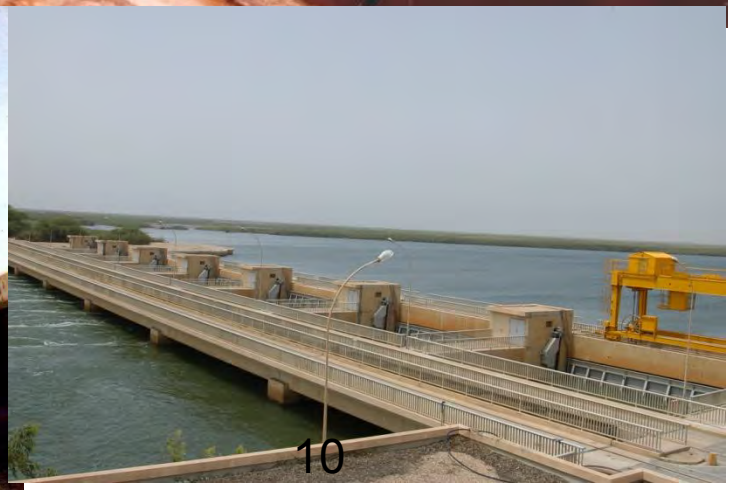
DIAMA
Fresh water for agriculture and safe drinking water

- Year-round provision of enough fresh water
- Development of agricultural activities
- Restoration of natural environment



FELOU DAM ON THE SENEGAL RIVER

- **LOCATION:** on the Senegal river, 15 km upstream from Kayes.
- **Brief description: r**un of the river dam; length : 945 meters. Maximum height : 2 m T.N. Number of generator units: 3. type : bulb . Maxi head height. 13,8 meters . Installed capacity: 70 MW .
- **AVERAGE PRODUCTION** : 320 to 350 GWH/YEAR
- **CONSTRUCTION COST :** About 100 million Euros
- **Opened in december 2013.**

Manantali Dam

Storage capacity: 11,3 billions m3

Energy Production: 800 GWh/year

River flow regulation: 300m3/s at Bakel station

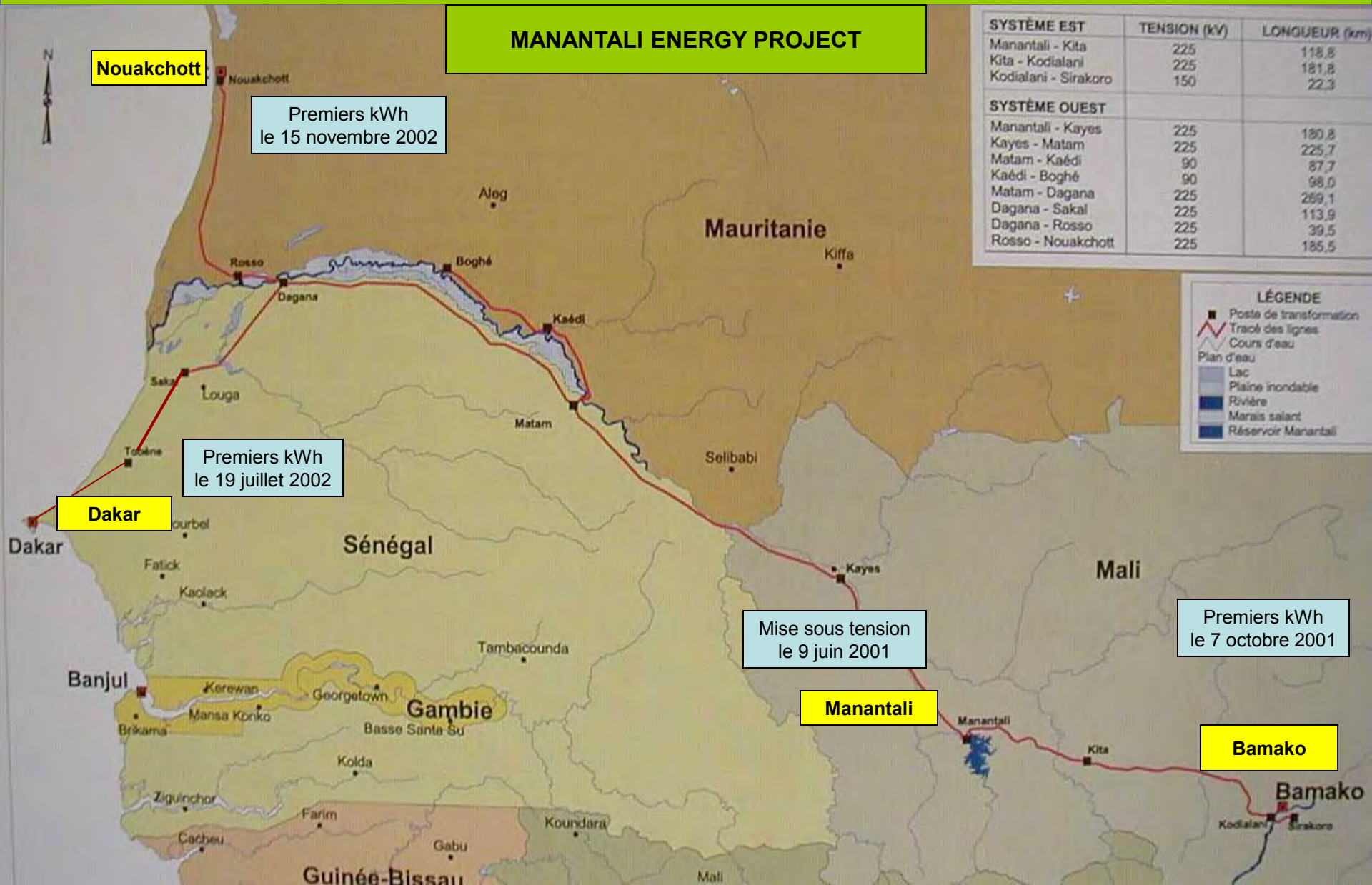
Irrigation capacity: 255 000 ha combined with DIAMA Dam

Artificial flooding(recession agriculture -Environment, ….)

Year –round navigability of the River from Saint-Louis(Senegal) to Ambidédi (Mali);

Control of eventual Flood

225kV power grid



Manantali FELOU

Operation Agreement: 15 years, renewable one time
SEMAF created in recent months

Power purchase agreement
wih the National Electricity Companies (SdE)
based on hydropower sharing(« costs
and benefits distribution key»

52 %	45 %	MALI (EDM - SA)
15 %	30 %	MAURITANIE (SOMELEC)
33 %	25 %	SENEGAL (SENELEC)

GOUINA DAM PROJECT ON THE SENEGAL RIVER

- **LOCATION:** on the Senegal River**,** 80 km upstream from Kayes

- **BRIEF DESCRIPTION :** run of the river dam; Normal reservoir level : 75 meters ; length : 1230 meters ; head height: about 23,5 meters ; number of generator units: 3
  type : Kaplan Installed capacity: 140 MW

- **AVERAGE PRODUCTION :** 570 to 620 GWh/year

- **State of progress:** Technical feasibility study was completed in 2004 and the additional environmental study in 2006. The project Coordinator has been appointed.

- **COST OF CONSTRUCTION:** 181,4 million EUROS

- **On-going works: Foundation stone laid in december 2013**

Important hydropower potential

- lectricite : 7278 MW

Guinea : 6000 MW

Mali : 1150 MW

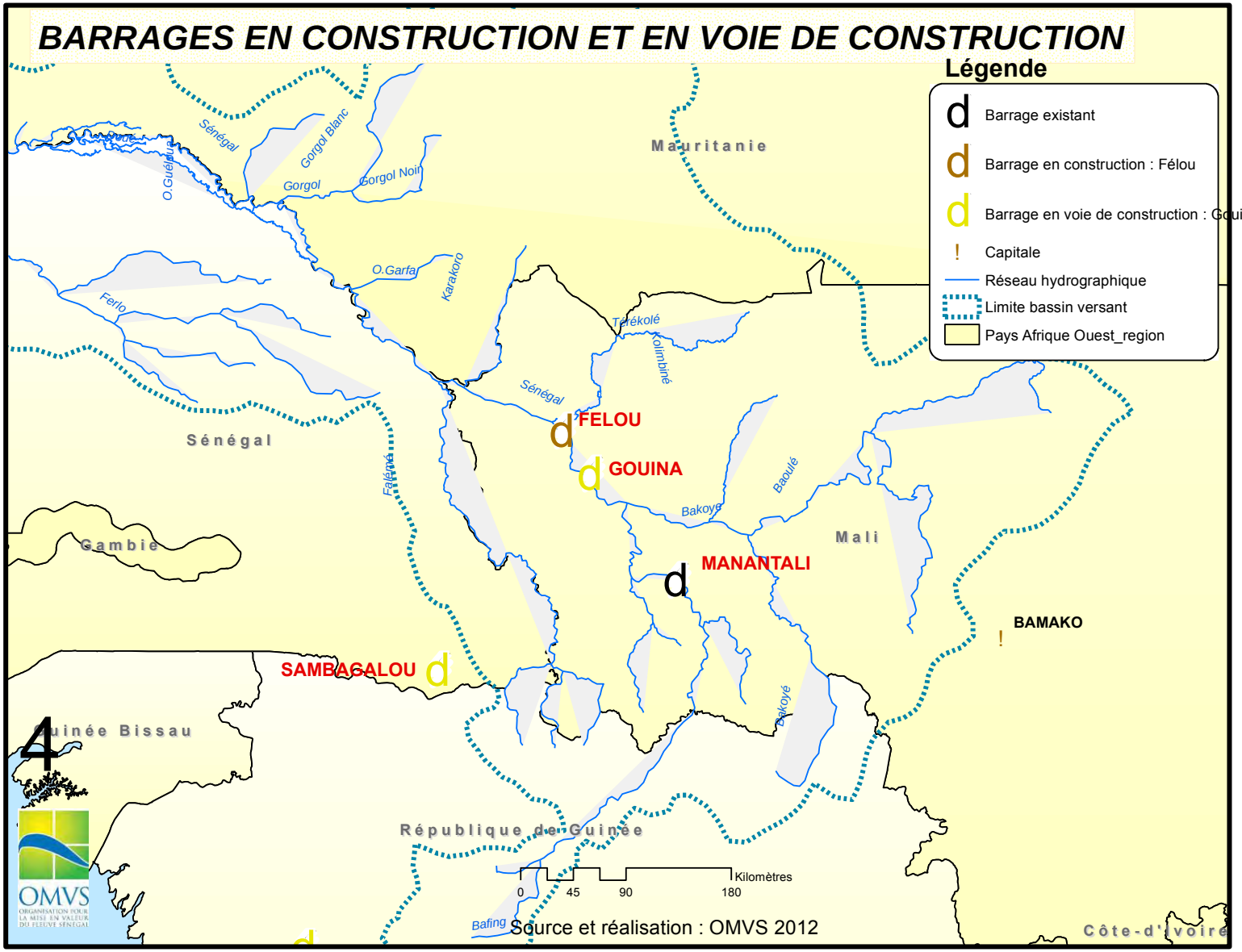
Sénégal : 128 MW

For this potential, only 240 MW are operated

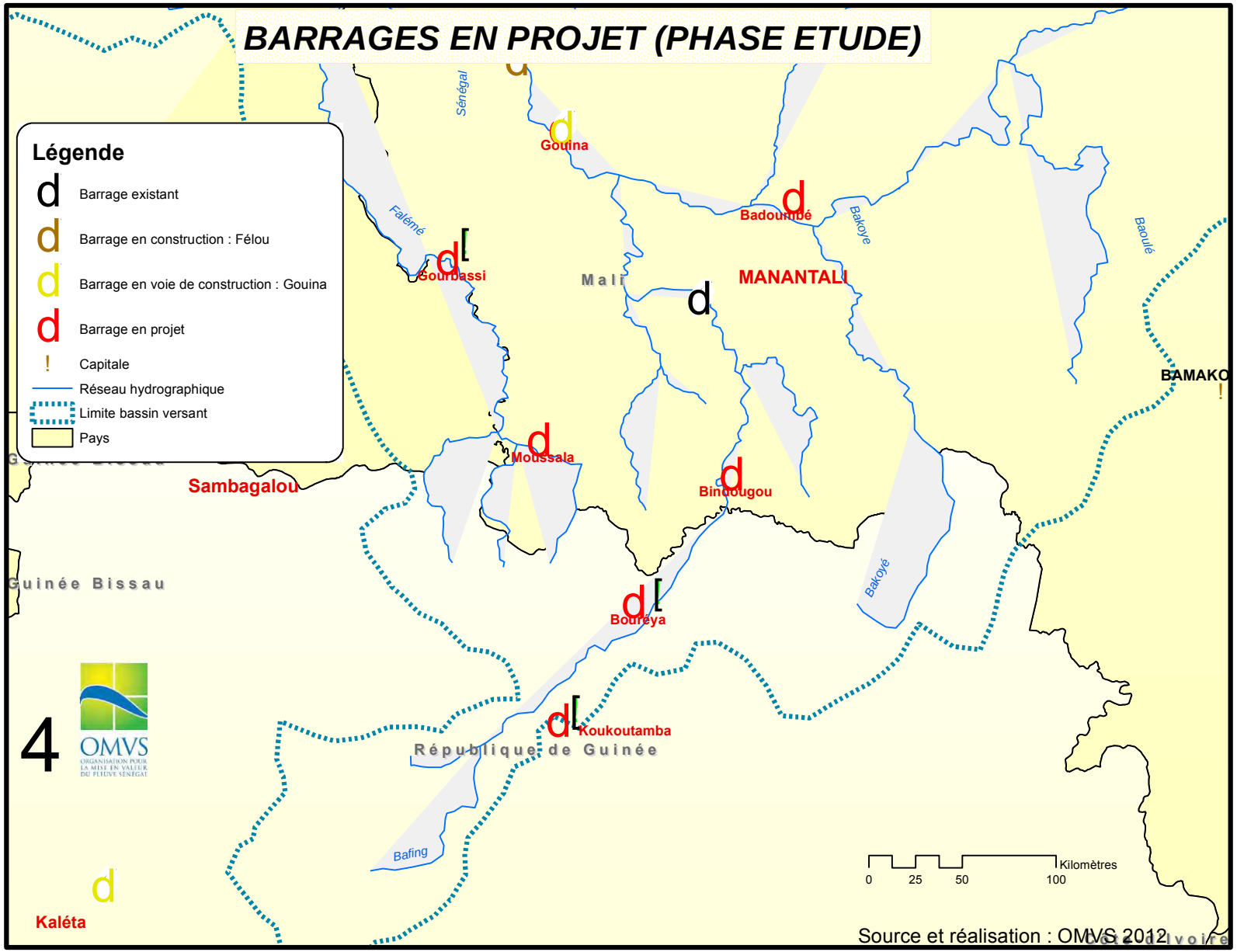
HYDROPOWER PROJECTS IN PROGRESS or PLANNED IN SHORT AND MEDIUM TERM

After completion of the so-called first generation infrastructures, OMVS has planned for the gradual implementation of other hydroelectric projects.

Dams planned or under construction: Félou and Gouina



Dams under study:
Gourbassi, Bouréya and Koukoutamba



Transportation

The OMVS Multimodal Transport Integrated System known as SITRAM has the purpose to achieve:

- Consistency of OMVS' comprehensive programme;
- Development of the river's natural function ;
- Strenthening egional integration through intensification of movements and exchanges ;
- Opening up production and consumption areas in the basin, sites of existing dams and sites of contemplated hydraulic structures;
- Strengthening of productive and trade sectors(agriculture, livestock, fisheries, mining, handicraft, and tourism);
- To create the conditions required for sustainable economic growth ;

- To put in place a sound social and environmental framework(reduction of carbon dioxide).


SCHEMA ILLUSTRATIF DE LA PREMIERE PHASE DU SITRAM-OMVS
NOUAKCHOTT
MAURITANIE
Sénégal
DIAMA
NAVIGATION MARITIME
DAKAR
SENEGAL
FELOU
GOUINA
Falémé
Bakoye
MALI
Gambie
GOURBASSY
MANANTALI
BAMAKO
Bafing
Bakoye
Guinée Bissau
BOUREYA
KOUKOUTAMBA
CONAKRY
GUINEE


SCHEMA ILLUSTRATIF DE LA PREMIERE PHASE DU SITRAM-OMVS
NOUAKCHOTT
MAURITANIE
Sénégal
DIAMA
Saint Louis
NAVIGATION MARITIME
DAKAR
SENEGAL
Ambidédi
FELOU
GOUINA
MALI
Falémé
Bakoye
Gambie
GOURBASSY
MANANTALI
BAMAKO
Bafing
Bakoye
Guinée Bissau
BOUREYA
KOUKOUTAMBA
CONAKRY
GUINEE


SCHEMA ILLUSTRATIF DE LA PREMIERE PHASE DU SITRAM-OMVS
NOUAKCHOTT
MAURITANIE
Rosso
Sénégal
Boghé
Podor
Richard Toll
DIAMA
Saint Louis
Caseas
Kaédi
Matam
NAVIGATION MARITIME
DAKAR
Bakel
Ambidédi
SENEGAL
FELOU
Falémé
GOUINA
Bakoye
MALI
Gambie
GOURBASSY
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Bakoye
Guinée Bissau
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NOUAKCHOTT
MAURITANIE
Via Rosso
Fleuve Sénégal
Boghé
Podor
Richard Toll
DIAMA
Saint Louis
Caseas
Kaédi
Matam
NAVIGATION MARITIME
DAKAR
SENEGAL
Bakel
Ambidédi
FELOU
GOUINA
Falémé
Bakoye
MALI
Manantali-Mahina
MANANTALI
Manantali-Tambaga
GOURBASSY
Connexion
Route-Voie ferrée
Bafing
BAMAKO
Kangaba
Gambie
Guinée Bissau
BOUREYA
Labé-Tougé vers Dinguiraye et Siguiri
KOUKOUTAMBA
CONAKRY
GUINEE


SCHEMA ILLUSTRATIF DE LA PREMIERE PHASE DU SITRAM-OMVS
NOUAKCHOTT
MAURITANIE
Diama-Rosso
Rosso
Boghé
Richard-Toll
Podor
Caseas
Kaédi
DIAMA
Saint Louis
Matam
NAVIGATION MARITIME
DAKAR
Dakar
SENEGAL
Bakel
Ambidédi
AMBIDÉDI
GOUINA
MALI
Manantali-Mahina
MANANTALI
GOURBA-SSY
Manantali-Tambaga
Connexion
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BOUREYA
Labé-Tougé vers Dinguiraye et Siguiri
KOUKOUTAMBA
CONAKRY
GUINEE

3. CHALLENGES

- The hydropower sector is very profitable. But funding to achieve the dams are difficult to mobilize
- the cost of hydrolectricité is low compared to other forms of energy such as heat
- Everything that is produced will be immediately sold and the production is not enough to cover the needs.
- But problem of funding

Navigation

- Investments for dredging and construction of docks and ports are important
- And countries have low investment capacity and low debt capacity
- The sector is profitable and economically viable but mobilizing financing is diffiicile

CONCLUSION

- Benefits
  - Exchange of best practices and experience sharing on major issues;
  - Sharing of resources and means
- Challenges
  - Financial
  - Technical
  - Political instability

OMVS
ORGANISATION POUR LA MISE EN VALEUR DU FLEUVE SÉNÉGAL

THANK YOU FOR YOUR ATTENTION