

NEW STRATEGIES OF DONORS IN THE IRRIGATION SECTOR IN AFRICA

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ABSTRACT

In 2005, FAO released an “Irrigation in Africa in figures” report which emphasized that the level of investment in agricultural water management has been declining for the past two decades. In response to the UN Millennium Development Goals and recurring food crises in Africa, political initiatives are being pursued such as the UK-led Commission for Africa. The report called for a huge effort in the irrigation sector with a plea to double the area of arable land under irrigation by 2015. Today the World Bank appears to lead the process of re-engagement in the sector. But only few donors seem ready to follow the momentum. In fact there are still a lot of doubts on: how to invest in a continent where irrigation is so risky with high costs, unreliable operation and maintenance, weak institutions, and meagre markets. Besides, new considerations call for prudence in irrigation development such as competition for water (growing urbanization, wetlands protections), climate change, and agriculture trade globalisation.

The aim of this paper is to try to describe the current donors’ approaches and the coherence of their strategies. Indeed the Paris Declaration on Aid Effectiveness obliges donors to adapt to countries’ demand and to harmonize their policies. It appears that in the irrigation sector donors do not have yet explicit strategies in Sub Saharan Africa. Several donors are not even certain that irrigation is a good entry point to solve poverty and food security problems, despite recent evidence brought about by the research community.

INTRODUCTION

There now seems to be a general consensus on the need to re-invest in water for agriculture in Sub-Saharan Africa (SSA). Unquestionably the topic is on the agenda of African leaders. It has been discussed during international meetings such as the World Water Forum IV in 2006. In the last couple of years different organisations such as the New Partnership for African Development (NEPAD) with the assistance of FAO, the Commission for Africa as well as G8 initiatives made the case for African irrigation development. But for the moment only few donors are trying to keep the momentum. Indeed on the field things are moving very slowly and many donors seem to have chosen “a wait and see” approach. Public investment is three to fourth times less than

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expected by NEPAD. Why are investment levels so low? That is the central question we would like to explore in this paper.

This work has been carried out by a master student who has investigated to which extent donors are preparing action plans and reengaging in a context of aid harmonisation. It should be considered more as a reflection in course than an exhaustive work and does not reflect necessarily the views of FAO.

A NEED FOR INVESTING IN AGRICULTURAL WATER MANAGEMENT IN SUB-SAHARAN AFRICA

An unquestionable need

Hunger and malnutrition are affecting the African continent in a dreadful manner. A large percentage of the population (33%), especially the youngest, is undernourished: when the world average calorie daily intake is reaching 2800 kcal per person, SSA remains at the level of 2500 kcal/p/d, with a large proportion (more than 250 million people) under 2000 kcal. Even when enough food is produced locally, poverty does not allow individuals to buy this food, as it was probably the case during the 2005 famine in Niger. In SSA the proportion of poor people is indeed the highest worldwide. When food crises occur due to conflicts or natural disasters (such as droughts, floods and epidemics), very costly mechanisms (through World Food Programme or NGOs) take over, with probably unconstructive consequences on local agriculture. It is even estimated (APF 2006) that between 1993 and 2003 food production has declined in SSA. Fertilizers are little used (9 kg/ha compared to 220 kg/ha in East Asia) and soil mining is a serious issue, as is general land degradation. The share of world trade for 9 of 10 of SSA major agricultural exports has decreased (APF 2006). Finally, all projections confirm that the population in SSA will continue to grow at an impressive rate (around 3 % per year). Although the recent years have witnessed a good economic growth, the situation might not appear to have changed much over the past 20 years, and even some factors make it worse, with new burdens threatening the continent such as HIV/AIDS, conflicts, rapid urbanization, increasing cost of energy and ultimately climate change. Lastly human migration - inside the continent as well as outside, especially Europe – is still at preoccupying levels with migrants cynically called “environmental refugees” (Myers, 2005)

An untapped potential

However it would be possible to produce enough food for the African population, thanks to both rainfed and irrigated agriculture. There is for instance a huge untapped potential for irrigation development. According to FAO (FAO, 2005), only around 9 million hectares of land in SSA are under some form of water management and 7 million are equipped, figure to be compared with 234 million hectares of the whole developing world. Of these 7 million probably 2 million are not exploited (World Water Forum IV). Water withdrawals for agriculture are very limited – just under 3% of the total renewable water resource – and water storage is well below the levels in other regions. As figure 1 shows the potential is thus immense in a continent where a large number of food commodities are in fact imported, and at a high cost. And even when water is

available, the majority of countries of SSA have not access since they are suffering from an “economic water scarcity” (See figure 2, Seckler *et al* 1998). Indeed countries are almost entirely dependent on external aid for such costly investments. Private investments are yet scarce, partly because investments are risky in Africa in a context of low commodities prices. On the other hand there is a huge spontaneous development of the informal (and private) irrigation, especially in peri-urban areas, that is not appearing in official statistics (Drechsel, 2006).

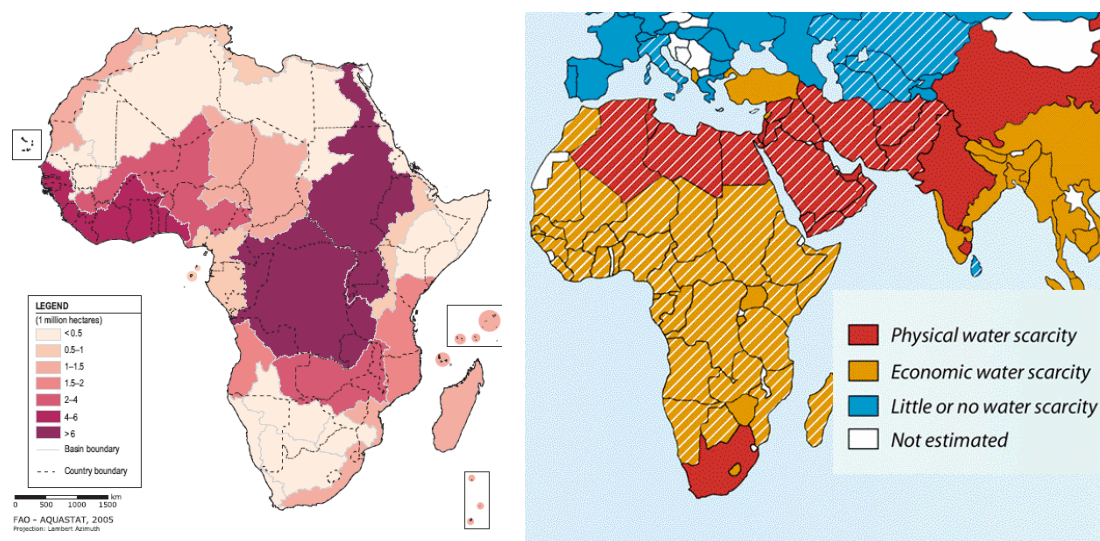


Figure 1. FAO, 2005 Irrigation potential by river basin (the reddish show large potential) and Figure 2 IWMI water scarcity map (Seckler 1998)

The magnitude of the effort needed

Future food demand can not be covered only by intensification of rainfed agriculture, it will require increased agricultural water management as well (FAO, 2003). Irrigation development should then play a valuable role to achieve the objective of eradicating extreme poverty and hunger, objective 1 of the Millennium Development Goals of the United Nations (2000). In this perspective many initiatives such as the Comprehensive Africa Agriculture Development Programme (CAADP) in cooperation with FAO (NEPAD 2002), or the Commission for Africa (Westby *et al*, 2005), have tried to evaluate the magnitude of the effort required. Of course views are differing (table 1) but there is a consensus that substantial funding is needed in the sector.

Table 1. Rough estimates of the investments needs targets

	New areas to be irrigated by 2015	Mean annual rate	Magnitude of total cost
FAO “business as usual scenario” (between 2002-2015) FAO, 2005	2 M ha	1.1 %	
CAADP 2002 (NEPAD 2002)	10 M ha	more than 5 %	37 billion US \$ for the whole Africa in 14 years
Commission for Africa, 2005 (Lankford in Westby et al)	5 M ha	3.8 %	20 billion US\$ in 10 years

ANALYSIS OF PAST EXPERIENCES

The “negative image of irrigation”

It appears that the donors’ community is adopting a cautious approach in re-engaging in agriculture water management. There are three main reasons for that:

- First, commodity prices are still low. As it has been shown before (Thompson, 2001) lending and prices seem to be well correlated. Only recent rise of cereals prices in 2006 (60 % on maize for instance in 2006) has reversed the long-established trend. Increased global population, changing diets, and expansion in biofuel use might continue push prices in the future but there is no certainty as to the direction of future price changes.

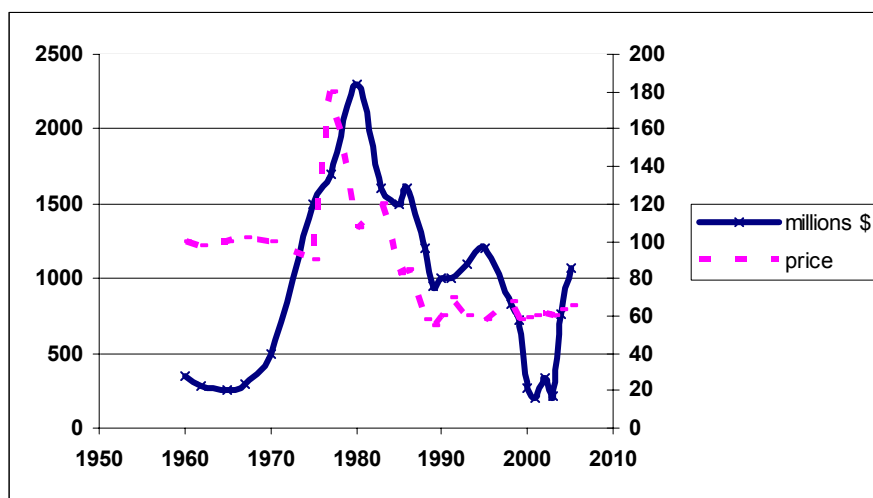


Figure 3. Food prices (right scale - index 100 in 1960) and WB lending (left scale adapted from Thomson ICID in ICID Seoul 2001, Joachim von Braun IFPRI, 2005 and J. Roux 2007)

Moreover, difficulties to transform, transport and market properly the products in Africa are also of major concern. Finally, the deficiency of good market regulations and the often-poor

competitiveness with cheap imported food (for instance rice from Asia in Senegal) are also serious issues.

- Secondly, it is commonly assumed that irrigation projects in SAA have often failed in the past, mainly because of poor management and poor integration in a competitive agricultural production system. The most traditional investment models have been schemes run by state agencies, with little control by farmers. Donors have turned away from such schemes that are financially unsustainable and poorly operated. More recently, other types of investments have been promoted, such as community led medium-sized schemes, but difficulties still abound, such as high cost of infrastructure development, or lack of accompanying infrastructure such as market access.

- Thirdly, many large projects have had some negative externalities: impacts on human health, on the environment (salinization, erosion after deforestation, pollution), and on population displacements. The work of the World Commission on Dams released in 2000 has been probably a major driver in the late 1990s for disengagement of donors in large-scale water infrastructure construction.

The lessons of a new collaborative study

In order to move forward on this difficult subject, and to follow the path initiated by NEPAD in CAADP, three major donors, World Bank (WB) International Fund for Agricultural Development (IFAD) and African Development Bank (AfDB) have launched a collaborative Program on Agricultural Water Investment Strategies in Sub-Saharan Africa, with the support of FAO and the International Water Management Institute (IWMI). The idea was to draw lessons from past experiences and to pave the way for a more strategic reengagement in agricultural water investments. A number of studies have been carried out as. From this work, the two main results are:

a) Some conclusions of the studies confirm the previous impressions

- Overall, irrigated production in SSA is generally characterized by low productivity
- Project design has been largely top down.
- Many investments have been made that were driven by strategic or political reasons rather than by economic profitability. New participatory approaches give better results.
- Farmer empowerment and participation are key to improving project quality.
- Institutional capacity building is very important.

b) But conventional wisdom is being challenged

- Costs of successful Irrigation Projects in SSA can be comparable with those in Asia, when leaving out “monumental failures”, and new generation, better designed irrigation projects are not much more costly than those in other regions.
- Although there were many failures in the 1970s and 1980s, recent projects have generally had acceptable rates of return.
- There have been successful recent project investments in small-scale community managed irrigation.

- Individual market driven investments by smallholders with low cost technology, and support to supply chains and marketing have also done well.
- There are examples of successful public investment in large-scale irrigation
- There is scope for private sector involvement
- There are increasing market opportunities, with prices of commodities on the rise again, and new niches, such as biofuels under fast development.

These conclusions of this “donor driven” study could have already some impact on donors’ opinion about irrigation in SSA, but what is their current position ?

WHAT ARE THE TRENDS IN INVESTMENTS IN SSA?

Water aid is on the rise again in a general context of growth of aid

According to OECD, worldwide aid in the water sector (around 7 % of the total investment of aid) has declined in the nineties and has picked up again in the early 2000s (fig 4). But it is quite difficult to isolate in OECD statistics, the real participation of donors in irrigation and drainage projects. What we know is that Water supply and Sanitation projects are dominating the picture, and Integrated Water Resources Management has attracted a lot of attention as well.

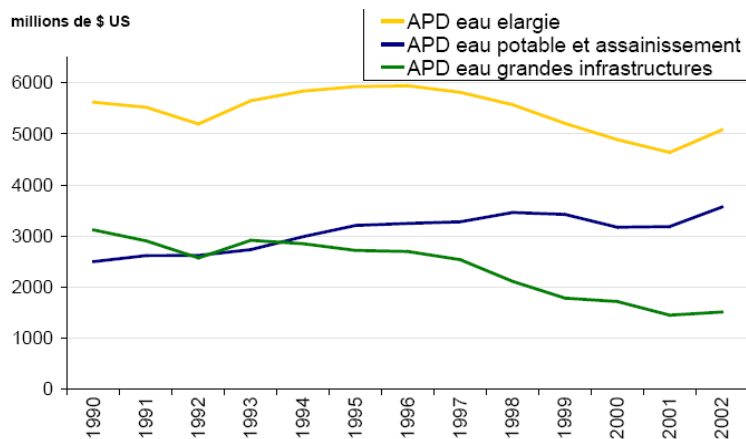


Figure 4. International aid in the water sector

(World Water Council- Aide Publique au développement 1990-2004 WWF4 : in yellow all sectors related to water, in green large infrastructure, in blue : potable water and sanitation)

One could mention for example the Nile Basin Initiative or the Niger basin Authority. This prudence on the irrigation sector is confirmed when we look at bilateral aid as well. Among the 11 main bilateral donors involved in SSA (Germany, France, Denmark, UK, Netherlands, Italy, Sweden, USAID, Canada, Finland and Norway), no one is really pushing on irrigation development in its national aid strategy. Some donors such as UK or France are proposing to double the amount of aid in this water sector but wish both to concentrate their efforts on water supply and sanitation. The endeavour towards irrigation in SSA is more multilateral at the moment for the last 5 years, and approximated 20 M\$ from the EU, probably 50 M\$ from IFAD,

200 M\$ from the African development Bank, and 280 M\$ from the World Bank. After some years of neglect for the I&D sector world-wide, the World Bank (WB) has decided to boost the topic through its “Re-engaging in Agricultural Water Management report” in 2006 and the launching of new dedicated projects. Investments in irrigation in SSA by the World Bank have quadrupled from 2004 to 2007.

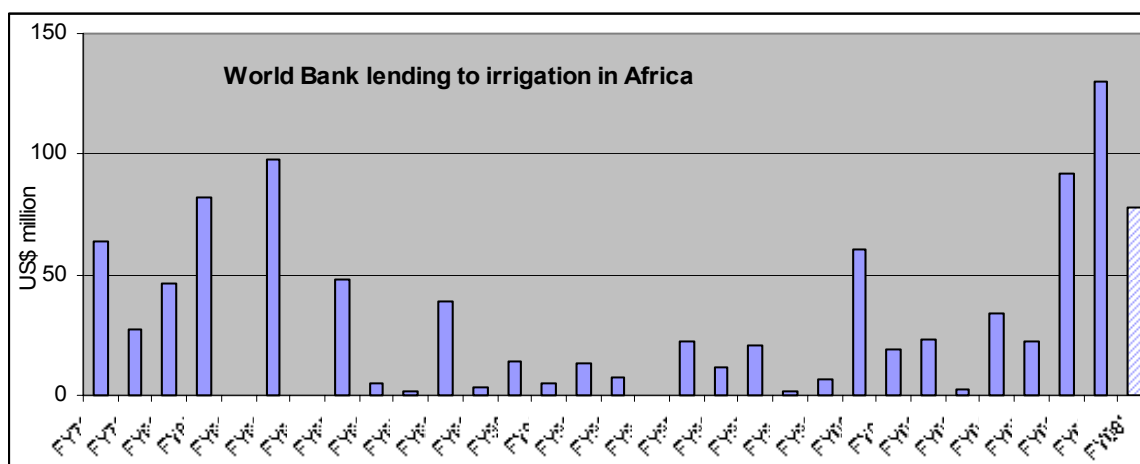


Figure 5. 20 years of World bank lending to irrigation in Africa. From J. Roux, 2007

Note: FY = Fiscal Year. FY08 is an estimate

But multi-donor re-engagement in irrigation has not been manifest yet in SSA

The World Bank recognizes that commitments on Irrigation and Drainage in Africa are still low and represent only 5 percent of the total Bank I&D portfolio, when commitments in other regions (Asia in particular) average several hundreds million \$ each year. Furthermore the recent review of the progress of the CAADP done in Moscow in 2006 by the African Partnership Forum gives a bleak image of the situation : in terms of evaluation of results, the pillar number 1 (land and water management) is considered as having been partially achieved only (APF, 2006).

DONORS' ORIENTATIONS

Donors should now follow the principles of aid harmonisation, as stated in particular in the 2005 Paris Declaration on Aid effectiveness. No donor should any longer “play alone”. The Declaration also brings ownership of investment decisions back to the countries or Regional Economic Commissions. Donors must accept then the views of national partners, which might take some time if there is not yet solid national water or irrigation policies.

From a literature review and after exchanging with a number of key donors, we found three types of results:

a) In the irrigation sector, there is not yet any formal platform where agreement on donors' strategies are discussed. Some hubs exist such as the donor platform for rural development <http://www.donorplatform.org/>, but without influence yet in the sector.

b) Some key principles seem to be well accepted by all donors

- **Irrigation projects should be developed in a basin framework**

The Integrated Water Resource Management principle (even IWRLandM) is the key word, at national or transboundary level. The aim is to avoid negative impacts of investments and optimise water allocation. Amongst the principles of IWRM, environmental sustainability is the main concern (wetlands protection and minimum flows in rivers).

- **Farmers participation is deemed essential**

Irrigation is a collective activity. This is true even for individual farmers who need to share the resource (for example the groundwater source). Irrigation investments are successful at the end of the day only if they are valuable tools available for farmers. Efforts to accompany farmers (organisations, water users associations, capacity building) must not be neglected. A renewed interest on local know-how would also be necessary. In other terms, investments should prioritize farmer-led projects, and respond to farmers' needs.

- **Policies and institutions must be comprehensible**

An enabling environment is key for success. Projects have to be embedded in clear national policies and at the moment, irrigation is too often stretched in the hands of two (or more) different ministries such as Agriculture and Water (Burke 2002). Clarification on agricultural strategies, water management strategies, land tenure and integration is thus mandatory. In the countries themselves, Poverty Reduction Strategic Papers, which should be one of the main instrument for donor coordination, mention little, if not at all, I&D aspects.

- **No specific irrigation technique is promoted**

At this stage, water saving is not the main priority in SSA (which is not the case for example in Northern Africa). But now efforts will bear on the whole water cycle and cover all water uses, which is something relatively new. Enhancing rainfed agriculture, developing rainwater harvesting or groundwater, or constructing irrigation infrastructure should be considered in a comprehensive perspective. Integration of agricultural water management in the context of micro catchments management is already a focus area for some interventions (such as WB or AFD in Madagascar projects). Conservation Agriculture is promoted by the French AFD as a priority (Gilard, 2006). Additional research is needed to this end. Finally as said before, traditional techniques (soil and water conservation and water harvesting techniques) are also important entry points.

- **Gender aspects**

Are now widely shared. However it is difficult to ensure that irrigation provides direct and lasting benefits to women. In 2000, IFAD conducted a thematic study of irrigation water user associations (WUAs) under IFAD-supported projects in all regions.(IFAD 2001) The review

found that only one third of the projects stressed gender issues and strategies. Usually, the *gender goals* of the projects included:

- preferential treatment of women farmers in the allocation of newly irrigated land;
- promotion of women's participation in the water user associations; and
- training and organization of women farmers.

However, as far as gender aspects are considered, it would be easy to demonstrate that small scale irrigation provides better opportunities for women to undertake initiatives, through effective women's associations.

c) Some differences remain in the approaches

- **Market orientation vs livelihoods approach**

The real debate is around market oriented production or livelihood approach (rural employment - more job per crop- and poverty reduction). IFAD for instance promotes direct pro-poor projects when the World Bank wishes economic growth to be the engine of poverty reduction, and sees financial profitability as the surest way to ensure sustainability of schemes. Should irrigated agriculture being then only commercially oriented? To which extent? Also, the vision of World Bank is to see increased private sector involvement in irrigation, that would bring in finance and expertise (development of commercial estates with outgrower schemes or public private partnerships for example).

- **Changing crops**

Consequently, there is still a strong debate about the choice of crops : cash crops for export or staple food. Do we need to promote national food self-sufficiency or to let the market decide the orientations? Finally the cost for the SSA countries (in terms of food imports) is huge, as it is for the international community on food aid through WFP. The debate is still very complicated with civil society movements (such as the food sovereignty promoted by Via Campesina Movement) or even the "right to food" promoted by the UN system.

- **Size of irrigation projects**

We know that large water infrastructures (dams in particular) will be part of the picture in. But dams will be built as multiple use facilities with electricity, drinkable water, irrigation and flow regulation as key functions. For two reasons: the huge cost of fossil energy and the return rate of projects that is really superior when multiples uses are taken into consideration. However, there is no consensus yet on the size of the irrigation schemes that have to be promoted (small scale, village based, large scale). Small scale irrigation seems to receive a large share of attention from the Commission for Africa (Lankford 2005). But it was debated during the last World Water Forum that "one should not be too dogmatic about size of projects; the debate about small versus medium versus large is not meaningful, and each type has a suitable place".

- **Cost recovery**

Questions on water pricing and cost recovery are central. The aim of water fees are first to cover operation and maintenance costs and also to encourage farmers to save water (Easter 2005). But in SSA this is still exception and it poses a threat. The task force on financing water for all (WWC 2006) said that the fact that irrigation water provided from public schemes is either free or massively under-priced it is a fundamental obstacle to investment. Finally what kind of cost recovery do we need to put in place; must it be full or partial? Donors all support the principle of cost recovery to but do not seem to have taken any strong position on the desirable level (whether to recover investment costs, or part of operation and maintenance costs).

COUNTRY MOBILISATION

Now investment projects should be truly owned and promoted by countries. But Poverty Reduction Strategic Papers yet contain little on irrigation, as explain above. Therefore, it is expected that countries will put in place specific strategies, policies, and master plans to guide interventions in the sector. Related policies should in any case be clarified, especially those with regard to land tenure problems. Already some countries have engaged in the development of comprehensive irrigation strategies (Zambia for example), and are translating the recommendations in action by proposing bankable projects under CAADP with FAO assistance. In some cases, involvement of Regional Economic Commissions might be required (for integration in regional problems, or trans-border projects). In West Africa, ECOWAS has been particularly dynamic in the last couple of years with the creation of a Water Unit in charge of providing information on best practices of water management as well as funding mechanisms an opportunities. (<http://www.wrcu.ecowas.int/en/pdf/Financinguidefinal.pdf>)

Role of ICID

Lastly, and importantly enough, it seems that the role of the national committees in irrigation and drainage could be valorised. There are 27 national committees on the whole continent (out of 53 countries), including 21 in SSA, These committees could advocate locally on the need for investment, and they could also support strategic efforts in the country. In Mali for example, the Malian ICID committee (AMID) has recently welcomed a national workshop (July 2006) on small scale irrigation development. The South Africa National Committee on Irrigation and drainage (SANCID) on the other hand is very committed to new reflections for the region. Sub regional committees such as the Regional Association on Irrigation and Drainage in West and Central Africa (RAID-ARID) also have an important role to play, and they are now extremely active. ARID organised in 2005 a major, and successful, professional show (http://www.arid-afrique.org/rubrique.php?id_rubrique=2). In March 2007, it has been a relay of the World Bank, FAO, IFAD, AfDB, and IWMI efforts on “Scaling up Agricultural water management in SSA”, with a strong Ouagadougou Call for Action, mobilising professionals from the whole continent as well as donors (the above plus DFID, France, Japan) towards reinvestment in the sector.

CONCLUDING REMARKS

Despite the intention of the Paris Declaration on aid harmonization, we found that there is no obvious harmonisation yet of donors on irrigation interventions in SSA. Perhaps there is still no clear consensus on how to reduce rural poverty and invest in irrigation. However, common understanding has been developed on a number of issues and aspects, which is a real progress. But the level of investment in irrigation is not yet satisfactory. There is a risk to waste time since the capacity of “absorption of funds” is limited in the continent. And we advocate that there is a danger that, after crises, projects would be done again precipitously. If the project cycle is shortened and planning and implementation is not properly done, the risk of failure is higher (Morardet et al 2005). Finally, it seems that new comers in Africa (China, Brazil, India) are interested in investing in the sector. We hope they could also take care of lessons of the past. Finally private companies seems also interested by new lands made available by several governments (such as Mali, Nigeria, Mozambique) but for biofuels, cotton, tobacco or other non-edible commodities production, posing a new challenge to the already difficult equation on food security in the continent.

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