



ORGANISATION FOR ECONOMIC
CO-OPERATION AND DEVELOPMENT



National Policy Dialogue on Strategic Financial Planning for Water Resource Management in Kyrgyzstan: Pilot project in one basin

7th meeting of the NPD, Bishkek, 18 April 2012

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Introduction and reminder of project objectives

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Background and objectives

- Follows on from the NPDs on WSS (2008-10) and IWRM in Kyrgyzstan
- Articulated with national WRM policies and related projects (e.g. World Bank, ADB, UNDP, UNECE, GIZ, SDC, UK DFID, US AID, JICA).
- **Ultimate objective:** to develop a Strategic Financial Plan for WRM in Kyrgyzstan
- **Pilot project:** focuses on economic and financial dimensions
- How economic instruments are and could be used in Kyrgyzstan to support financially realistic WRM planning in one selected basin
 - review the status of WRM policies and tools at national level
 - investigate how economic instruments are implemented to address water sector priorities in the selected pilot basin
- Any tariffs, taxes, charges, license-fees or fines related to WRM

Methodology & Outputs

Task 1: National level

- Summarise the roles of Government and non-Government institutions in relation to WRM.
- Identify the main challenges faced by WRM in Kyrgyzstan
- Produce an inventory of water policy instruments at national level including legal, administrative and economic instruments.

Task 2: Basin level (Issyk-Kul)

- Summarise the major WRM challenges in the pilot basin.
- Assess the existing use of economic instruments for WRM in the pilot basin
 - How are economic instruments applied in the basin?
 - What are the main related financial flows for WRM in the basin?
- Instruments assessed for incentives created and revenue generated - OECD evaluation methods
- Delineation of instruments use to finance sector governance/monitoring systems and those for specific measures/infrastructure

Task 3: Recommendations on the reform of economic instruments

- **Key outputs:** Recommendations for improving instruments for water resource management



Water Resource Management challenges in Kyrgyzstan

Existing Instruments

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Freelance environmental experts



Existing Economic instruments

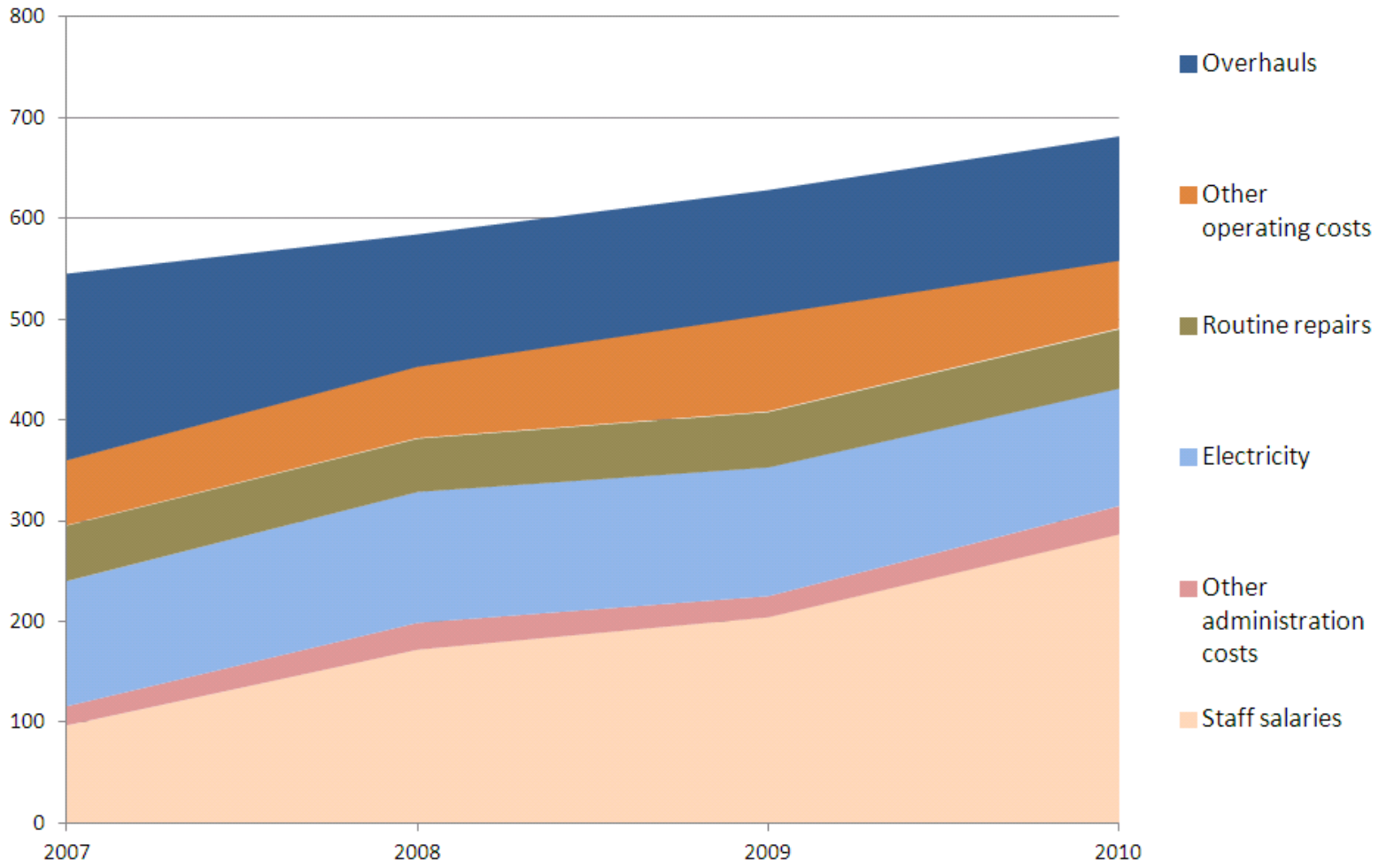
1. Irrigation Charges

Summary		
Financial performance	✘	Revenues are only 10% of DWMM's budget (68m KGS, total expenditure 682m)
Economic performance	✘	Charges unrelated to cost of provision - distorted incentives
<i>Proposals</i>		<i>Differentiate Tariffs: Link to cost of provision</i>
		<i>Increase Tariffs: O&M costs covered in short term</i>
		<i>Increase Tariffs: Capital costs covered in longer term</i>
		<i>Subsidies: explicit, transparent, in form of rebate?</i>
Legal / Institutional changes	✓	None required

Existing Economic instruments

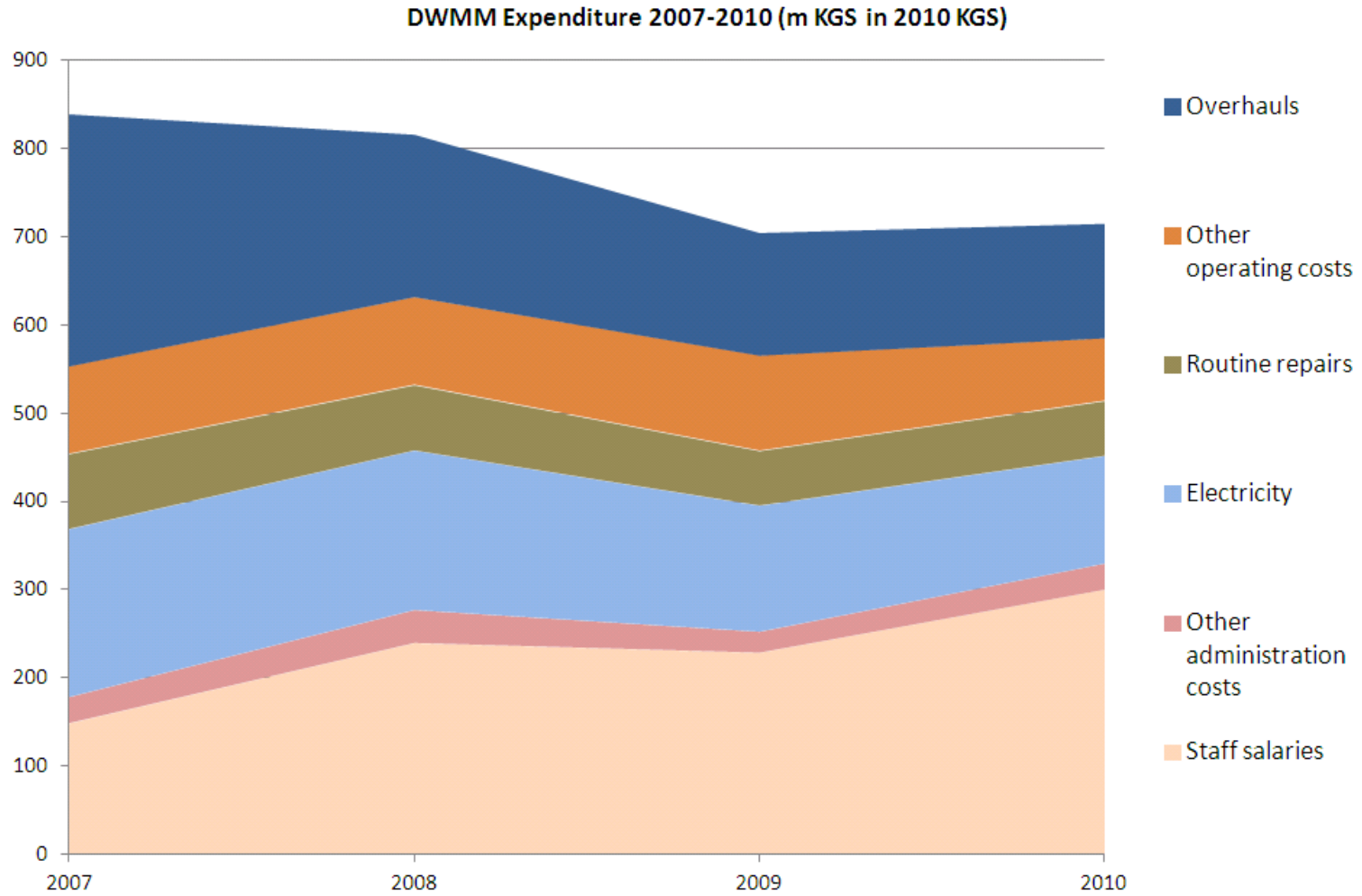
1. Irrigation Charges – DWMM Expenditure

DWMM Expenditure 2007-2010 (m KGS)



Existing Economic instruments

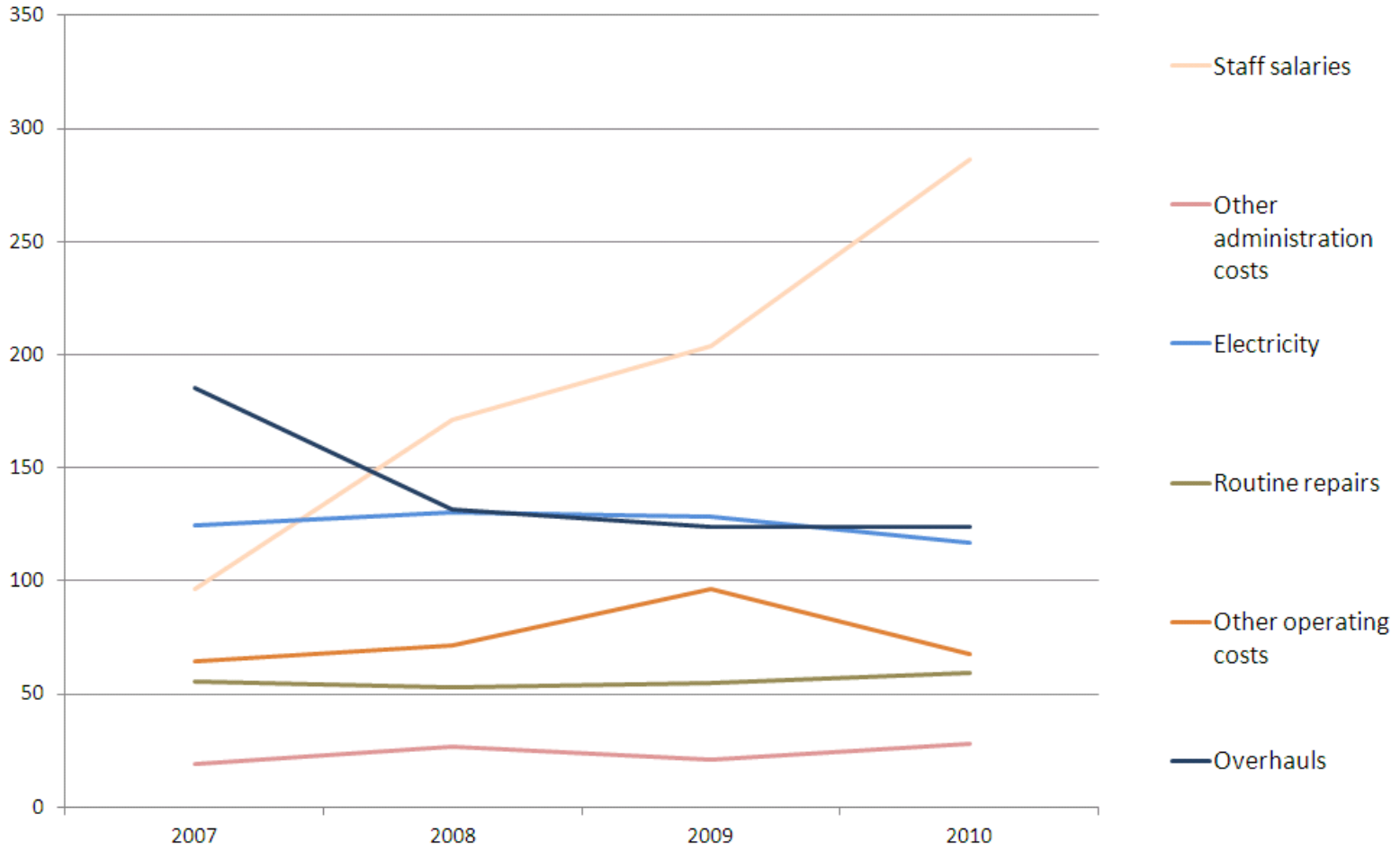
1. Irrigation Charges – DWMM Expenditure



Existing Economic instruments

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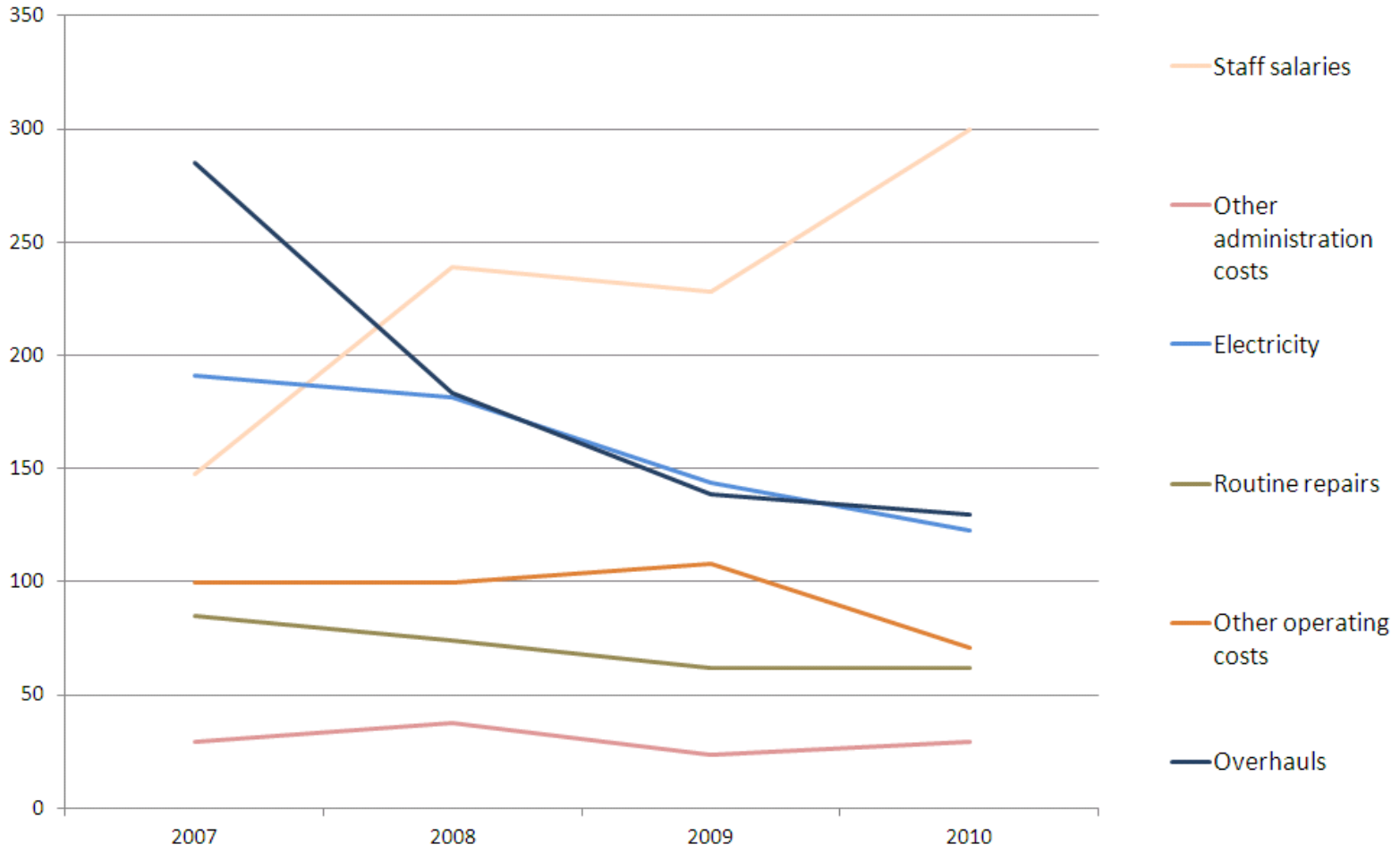
DWMM Expenditure 2007-2010 (m KGS)



Existing Economic instruments

1. Irrigation Charges – DWMM Expenditure

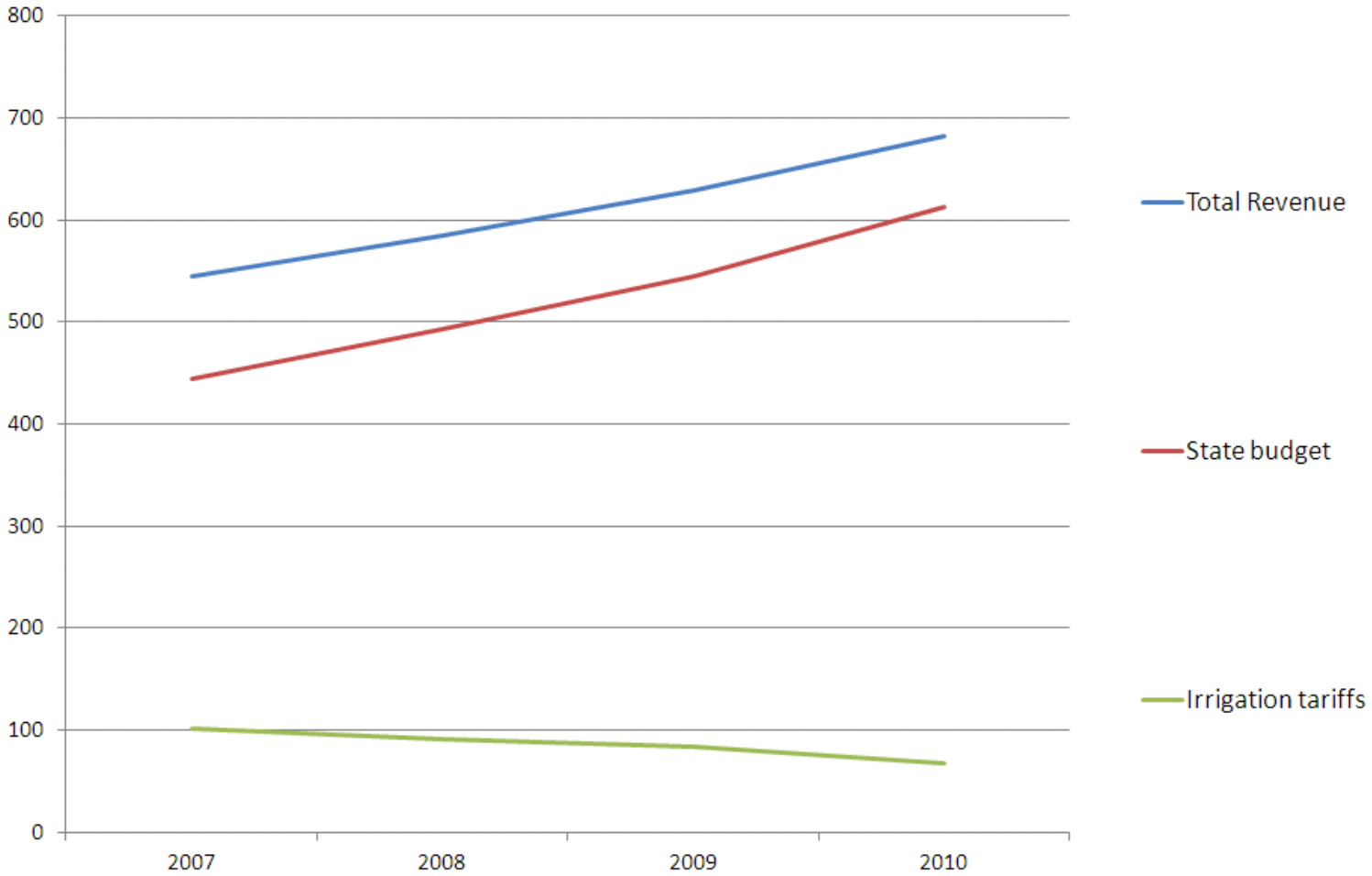
DWMM Expenditure 2007-2010 (m KGS in 2010 KGS)



Existing Economic instruments

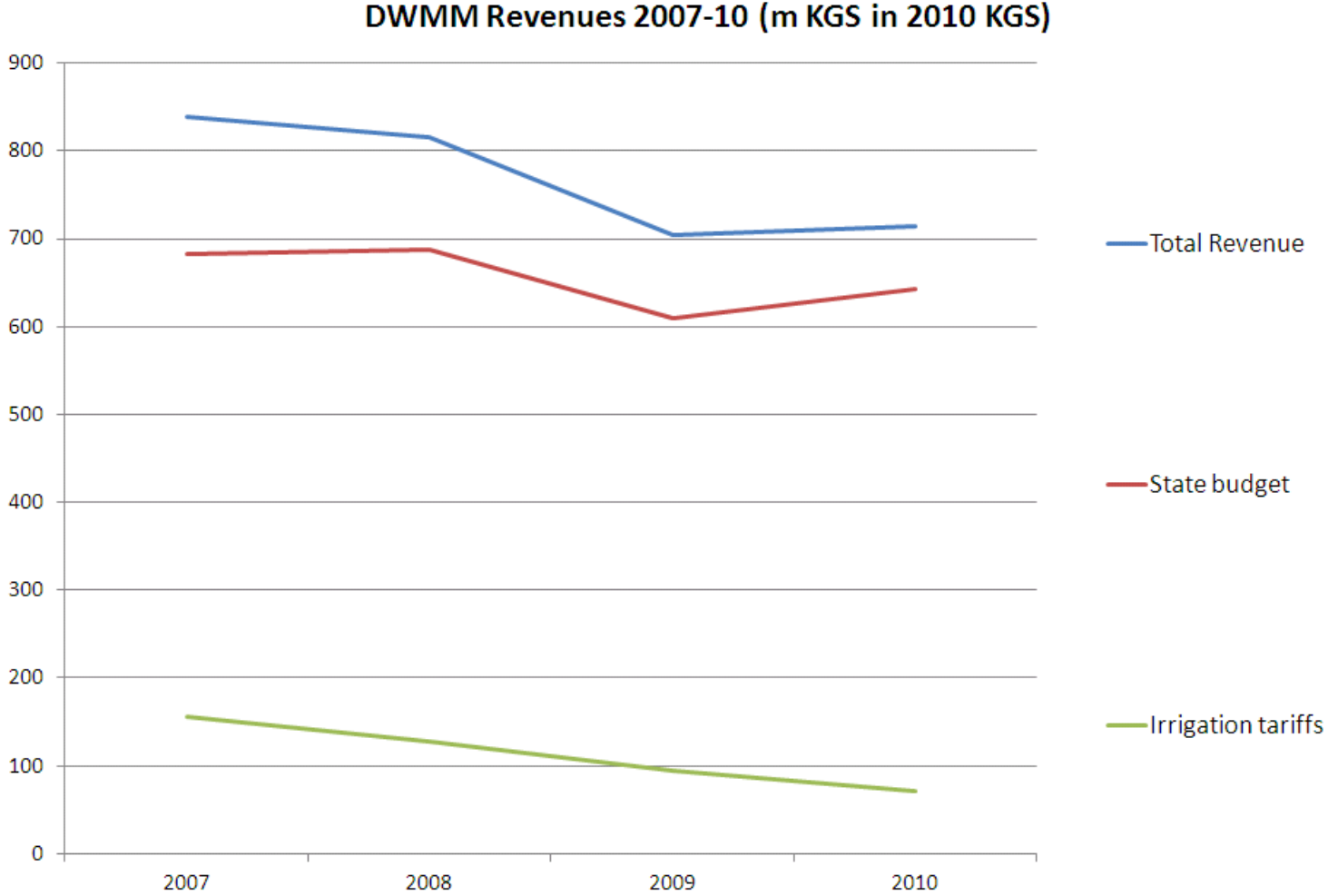
1. Irrigation Charges – DWMM Revenues

DWMM Revenues 2007-10 (m KGS)



Existing Economic instruments

1. Irrigation Charges – DWMM Revenues



Existing Economic instruments

1. Irrigation Charges

Implementation Risks		
Affordability	✓	Tariffs currently very low - increases should be affordable
Effectiveness	✗	DWMM salaries increasing, maintenance investment decreasing, decreasing tariff revenue share. Lack of autonomy in expenditure allocation
Political	✗	Tariff increases = political football "Discretionary" subsidies = politically driven?
Risk Mitigation Strategies?		
<i>Effectiveness</i>		<i>DWMM reform: Greater autonomy. WUA representation at board level? Objective performance measurement and incentives for management? All accounts in public domain?</i>
<i>Political</i>		<i>WUA representation at board level of DWMM?</i>
		<i>Financially semi-autonomous (most local revenues are re-invested locally).</i>

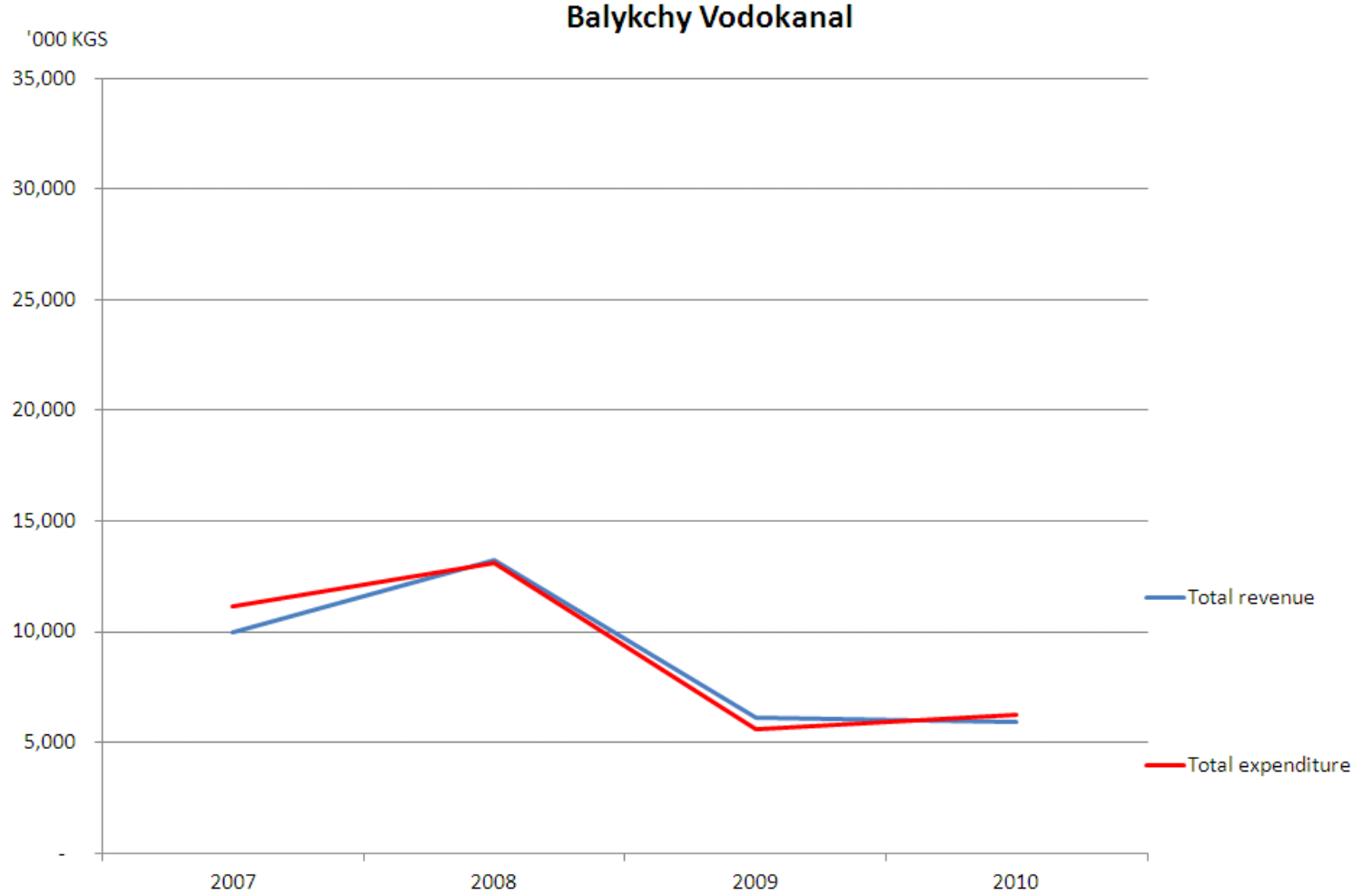
Existing Economic instruments

2. Water and Wastewater Tariffs

Summary		
Financial performance	✘	Revenues do not yet cover O&M. No capital maintenance, growth or quality investment
Economic performance	✘	Charges unrelated to cost of provision or actual volumes consumed - distorted incentives
	✘	No abstraction or water pollution charges: externalities not covered, reduced incentive for efficient resource use
Proposals		<i>Metering, particularly large users, Improved collection rates</i>
		<i>Increase Tariffs: O&M and Capital Maintenance costs covered in short term targeting visible service improvements</i>
		<i>Capacity & volumetric charge components</i>
		<i>Subsidies: channelled through social security (OECD report 2010: total subsidy for water and sanitation channelled through soc-fund = 71k€ =1.4 cent per capita)</i>
Legal / Institutional changes	✓	Might be required (e.g. debt write-off)

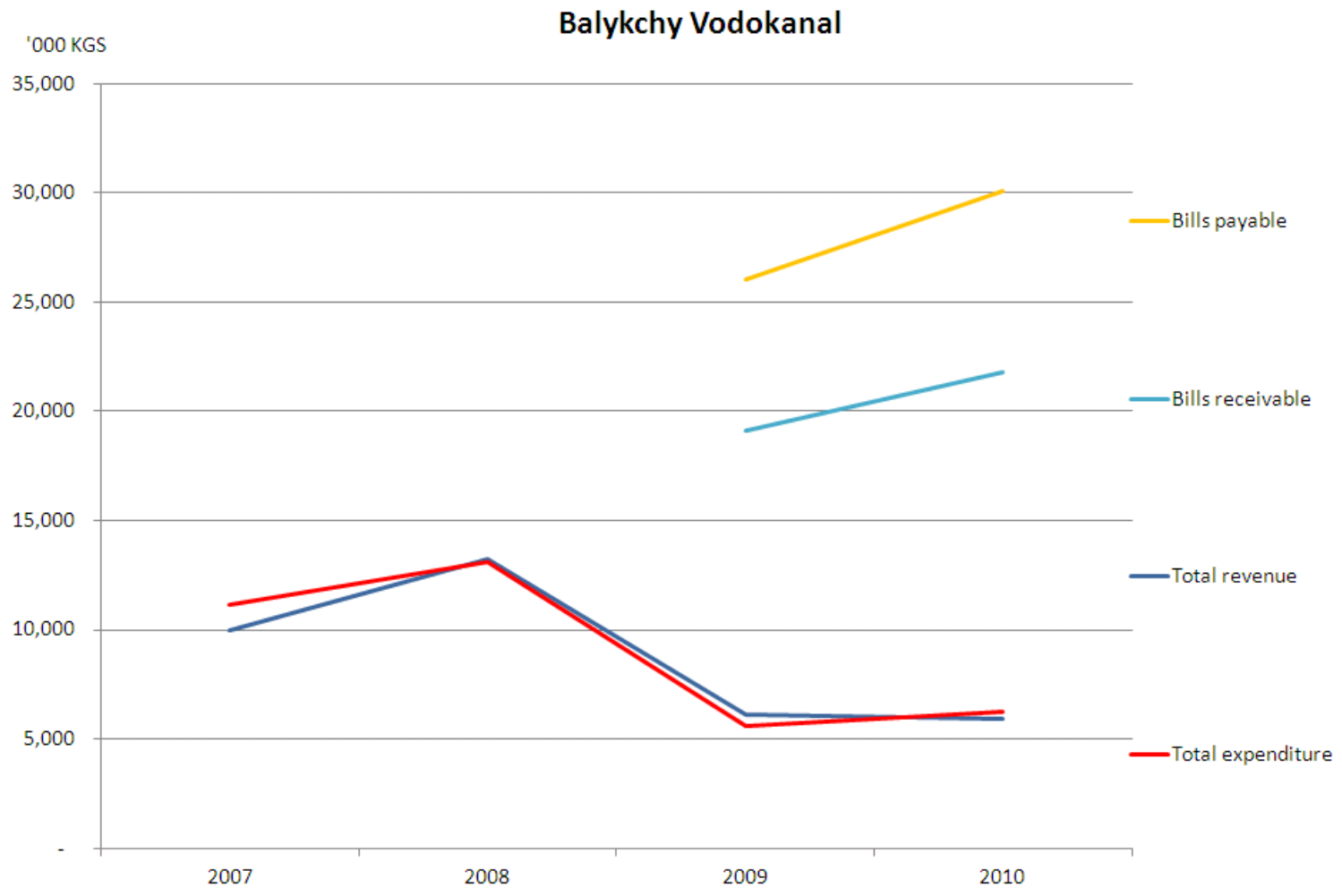
Existing Economic instruments

2. Water and Wastewater Tariffs – Financial Data



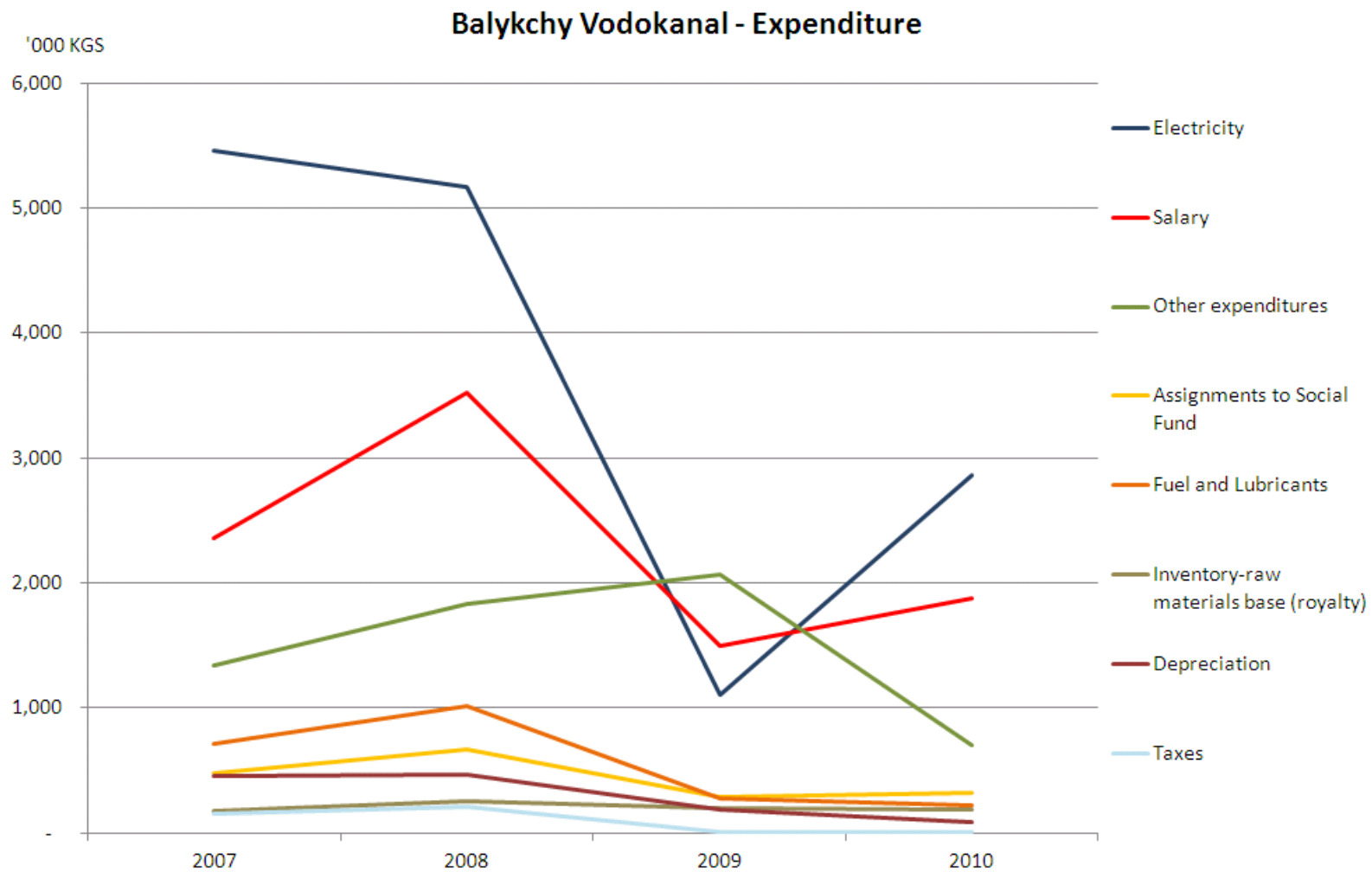
Existing Economic instruments

2. Water and Wastewater Tariffs – Financial Data



Existing Economic instruments

2. Water and Wastewater Tariffs – Financial Data



Existing Economic instruments

2. Water and Wastewater Tariffs

Implementation Risks		
Affordability	✓	Current tariffs very low – scope to increase without raising to unaffordable levels for most Households
Effectiveness	✓	Vodokanals have some autonomy of expenditure, (e.g. marginal revenues could be used to invest in new electro-mechanical equipment to reduce electricity costs)
Political	✗	Tariff increases in low-service environment are contentious
Risk Mitigation Strategies?		
<i>Centrally or donor funded specific and highly visible service improvement prior to tariff increase as justification</i>		
<i>Subsidies: media campaign accompanying tariff increase informing customers of process to obtain (e.g. through social-fund)</i>		
<i>Transparency: public access to Vodokanal accounts? Customer representation on Vodokanal board?</i>		

Existing Economic instruments

3. Rural Drinking Water Supply Tariffs

Summary		
Financial performance	✘	Revenues supposed to cover O&M only. Low collection rates
Economic performance	✘	No abstraction / resource use charges (although these would be minimal)
	✓	Provision of cheap potable water prevents use of unsafe sources = public health benefits (rural areas often have more “competition” from unsafe, free sources)
<i>Proposals</i>		<i>Delegate services to independent, <u>professional</u> or private operators</i>
		<i>Increase operating areas for economies of scale / addressing local inequality</i>
Legal / Institutional changes	≈	May be required. Economic regulation required but could be done under same mechanisms as Vodokanals

Existing Economic instruments

3. Rural Drinking Water Supply Tariffs

Implementation Risks		
Affordability	✓	No changes to tariff proposed, only increase in collection rates. Increased economies of scale and possibility of cross subsidies between villages.
Effectiveness	✓	The proposal is an institutional change which should improve effectiveness
Political	≈	Involving the private sector can be contentious. Risk of concession award by “patronage”. Resistance from incumbent operators?
Risk Mitigation Strategies?		
		<i>Involvement of CDWUUs in tariff and service level regulation?</i>
		<i>Cross subsidies where affordability is currently an issue?</i>

Existing Economic instruments

4. Environmental Pollution Charges

Summary		
Financial performance	✘	Revenues are low and do not cover cost of monitoring / compliance enforcement, are not high enough to fund eventual subsidies (I.Kul = 14k€ in 2010)
Economic performance	✘	Charge not based on actual economic costs?
	✘	Self reporting.
	✓	Charging system simple, coherent, logical
<i>Proposals</i>		<i>Remove Vodokanal exemption and allow pass-through to Vodokanal customers who pollute</i>
		<i>Charges to be based on actual monitoring data to incentivise pollution reduction and to fund monitoring</i>
		<i>Independent monitoring / enforcement</i>
		<i>Revision of surface water quality standards – in line with OECD recommended standards for EECCA</i>
Legal / Institutional changes	✓	May be required (e.g. standards)

Existing Economic instruments

4. Environmental Pollution Charges

Implementation Risks		
Affordability	x	Appropriate charges to be determined. Cost may make some businesses unviable?
Effectiveness	x	Enforcement difficult due to large conflicts of interest for enforcement agency staff
Political	x	Resistance from incumbent polluters, resistance to tariff increases in Vodokanals
Risk Mitigation Strategies?		
		<i>Donor funded study on appropriate charges, with industry participation / buy-in?</i>
		<i>Inclusion of subsidy / “polluter solidarity” mechanism into charges (revenue recycling)</i>
		<i>Register (and map) of polluters, payments and subsidy grants published (on internet). Reporting Hotline.</i>
		<i>Public support for increased charging through media campaign / NGO participation in enforcement</i>

Existing Economic instruments

5. Environmental Penalty Payments

Summary		
Financial performance	✘	Linked to pollution charging (5 x normative charge). No change required if pollution charges are increased?
Economic performance	✘	Normative multiplier should be significantly higher than chance of detection of non-compliance
	✘	Western experience shows that “fines” are insufficient and criminal penalties required
<i>Proposals</i>		<i>No change, or consider change to multiplier depending on the eventual monitoring scheme</i>
		<i>Consider criminal provisions for gross negligence / malicious intent in law?</i>
Legal / Institutional changes	✓	May be required (e.g. standards)

Existing Economic instruments

5. Environmental Penalty Payments

Implementation Risks		
Affordability	✓	Should not be a concern as penalty payments are not “supposed” to be paid
Effectiveness	✗	Similar agency problem to pollution charge payments
Political	✗	Resistance from business ?
Risk Mitigation Strategies?		
		<i>Consider criminal provisions for gross negligence / malicious intent in law?</i>
		<i>Publishing of enforcement test results / involvement of NGOs in enforcement for independent testing?</i>

Existing Economic instruments

6. Commercial Mineral and Groundwater Exploitation

Summary		
Financial performance	✓	Payments split into “Bonus” and “Royalty” , approx 3m€ in 2010, not used directly for water resource management (not “earmarked”)
Economic performance	✗	This tax is an unsuitable proxy for water abstraction or pollution charging
<i>Proposals</i>		<i>No change – do not use for WRM?</i>
		<i>Consider applying the extractive industry transparency initiatives (EITI) to this instrument?</i>
Legal / Institutional changes	✓	May be required (e.g. transparency)

Existing Economic instruments

7. Land and Property Tax

Summary		
Financial performance	✓	These taxes are general revenue raising taxes (32m€ in 2010), more than covering costs of administration (land registry?)
Economic performance	✗	Not used specifically for WRM, but treatment of pumped irrigation land as “non irrigated” presents an additional implicit subsidy for pumped irrigation on top of existing subsidies
<i>Proposals</i>		<i>Change to Land Value tax based on market value rather than classifications?</i>
		<i>OR.. include component for WRM reflecting water supply, sanitation, irrigation, flood control, drainage infrastructure etc</i>
Legal / Institutional changes	✓	Unlikely to be required

Existing Economic instruments

7. Land and Property Tax

Implementation Risks		
Affordability	✓	Taxes are automatically linked to ability to pay / wealth, as they are based on value
Effectiveness	✓	A small increase would result in considerable revenues for national priorities, including WRM, as the taxes are effective and have a very wide base.
	✗	Unless agencies responsible for public works receive increased revenues from increased land and property taxes from improved land, they have no incentive to invest (this agent problem also extends to individuals)
Political	✗	GoK authorities opposed to “earmarking”
Risk Mitigation Strategies		
		<i>Explain necessity of earmarking in terms of incentives</i>
		<i>Land valuations / tax register to be in public domain</i>

Existing Economic instruments

8. Payments for Ecosystem Services (PES)

Summary		
Financial performance	≈	Typically no or little cash transactions. Costs of administering schemes may not be covered.
Economic performance	✓	Payment for prevention of environmental degradation is usually much cheaper than payment for restoration or remedy
	✗	May be difficult to value services (e.g. what is the actual cost of deforestation?)
<i>Proposals</i>		<i>One donor supported scheme in existence... could be rolled out as part of Basin authority remit?</i>
Legal / Institutional changes	✓	May naturally fall under Basin Authority responsibility, but may need changes to mandate of Basin Authorities / funding structures?

Existing Economic instruments

9. Subsidies

Subsidies noted (but not analysed)

Electricity used by irrigation pumping station

Capital and **O&M** subsidies to rehabilitate, develop, operate and maintain irrigation systems

A general blind “**environmental** subsidy” to all industries abstracting water directly from water bodies

An “**environmental** subsidy” to (hydro)power stations as they do not pay for the non-consumptive use of water

A general blind “**environmental** subsidy” to all industries in the form of low pollution fee charges (non-monitored / enforced)

Capital subsidies to water utilities;

A general blind subsidy to population/households who pay tariffs well below the sustainable cost recovery level (full **O&M** costs recovery);

Subsidised **WSS tariff** paid by privileged categories of population (veterans, invalids etc.). Note that these social categories also benefit from other subsidies including Land Tax exemptions, etc



Water Resource Management challenges in Kyrgyzstan

New Instruments

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New Economic instruments

10. Surface Water Abstraction Charges

Summary		
<i>Proposal</i>		<i>Consumptive charge for use of surface water resources</i>
		<i>Introduce volumetric abstraction charge for large users</i>
Economic purpose		Consumptive use of water resources has an opportunity cost for other users.
Financial purpose		General Revenue (improving ability to fund all priorities including WRM).
Legal / Institutional changes	x	May be required. Water Code 2004 does not expressly refer to abstraction charges under “water use permits”.

New Economic instruments

10. Surface Water Abstraction Charges

Implementation Risks		
Affordability	x	Depending on the “opportunity” cost determined, could have significant impact on users
Effectiveness	x	Determination of appropriate charge is difficult
Political	x	Resulting tariff increases will be sensitive. Determination of appropriate charge subject to political interference?
Risk Mitigation Strategies		
<i>Confine charges to commercial enterprises, power companies and vodokanals (i.e. exempt irrigation)</i>		
<i>Agree clear, objective method for price setting, relating to availability / seasonality. Investigate if market mechanisms could be used</i>		
<i>Publish abstraction permits, volumes, payments and user map. Set up hotline, involve NGOs and WUAs in enforcement.</i>		

New Economic instruments

11. Surface Water Non-Consumptive Use Charges

Summary		
<i>Proposal</i>		<i>Charge for non-consumptive use of surface water resources</i>
		<i>Differentiated depending on type of use (e.g. cooling, hydropower, shipping (locks & weirs))</i>
		<i>Should have seasonal factor adjusted for opportunity cost of water retention / environmental damage</i>
Economic purpose		Non-consumptive (i.e. use affecting timing of availability, or quality) may also have a cost.
Financial purpose		General Revenue (improving ability to fund all priorities including WRM).
Legal / Institutional changes	x	May be required. Water Code 2004 does not expressly refer to non-consumptive charges under “water use permits”.

New Economic instruments

11. Surface Water Non-Consumptive Use Charges

Implementation Risks		
Affordability	x	Depending on the “opportunity” cost determined, could have significant impact on users
Effectiveness	x	Determination of appropriate charge (and structure) is difficult, particularly in case of non-consumptive use
Political	x	Resulting tariff increases will be sensitive. Determination of appropriate charge subject to political interference?
Risk Mitigation Strategies		
<i>Confine charges to commercial enterprises, power companies and vodokanals (i.e. exempt irrigation)</i>		
<i>Agree clear, objective method for price setting, relating to availability / seasonality. Investigate if market mechanisms could be used</i>		
<i>Publish abstraction permits, volumes, payments and user map. Set up hotline, involve NGOs and WUAs in enforcement.</i>		

New Economic instruments

12. Natural Hazard Insurance

Summary		
<i>Proposal</i>		<i>Owners of water retaining structures should be obliged to take out insurance for failures resulting in damage to the structure / other parties</i>
		<i>Land / Property owners in areas at risk of flood or other natural hazard required to take private insurance</i>
Economic purpose		Discourage construction in risk-prone areas, incentivise safe dam operation, access to private risk management skills (from private insurers)
Financial purpose		Reduction of GoK liabilities for natural disasters, however may increase cost of operations for state owned infrastructure (insurance premiums)
Legal / Institutional changes	x	May be required. Mandatory insurance may also require regulation of insurers, and the insurance market

New Economic instruments

12. Natural Hazard Insurance

Implementation Risks		
Affordability	✘	May be a concern (risky land = cheap = attracts poor people. High, compulsory insurance premiums would to some extent negate the discount on the land)
Effectiveness	✘	Given enforcement of planning regulations is difficult, enforcement of compulsory insurance may also suffer the same problem (except for large enterprises).
Political	✘	Likely to be extremely sensitive as it could affect poor, rural people who are currently either uninsured, or insured for “free” by the State.
Risk Mitigation Strategies		
<i>The insurance premiums may need to be subsidised, or offset by increases in social payments (which makes households no worse off, but maintains the “price signal”)</i>		
<i>List of “risk zones” for insurance purposes to be made public, to avoid fraud</i>		
<i>If regulations to be applied to existing developments, they should be phased in slowly, with a gradually decreasing subsidy (to prevent rapid property devaluation)</i>		

New Economic instruments

13. Excise Taxes / Deposit Refund Scheme

Summary		
<i>Proposal</i>		<i>Excise Tax and equivalent Custom Duty or other tax on locally produced or imported specific chemical products and lubricants used in agriculture and responsible for diffuse pollution of water bodies</i>
		<i>Deposit refund scheme covering the aforementioned products whereby part of the product tax or duty is refunded in return for the delivery of unused products or their containers for safe disposal at government-approved depots.</i>
Economic purpose		Incentivise safe disposal of diffuse pollutants and capture economic cost of diffuse pollution
Financial purpose		Pay for water quality monitoring / subsidise reduction of point-source or diffuse pollution
Legal / Institutional changes	x	Changes may be required to tax code. Collect / Refund / return responsibilities and system will need to be established.

New Economic instruments

13. Excise Taxes / Deposit Refund Scheme

Implementation Risks		
Affordability	✗	Chemical products make up significant cost to farmers. Likely to be an issue.
Effectiveness	✗	Depends on existing product tax collection efficiency, and extent to which products are used / overused.
	✗	Could promote a black market in these products, provide opportunities for customs kickbacks.
Political	✗	Likely to be sensitive as it mainly affects farmers
	✓	More customs revenues?
Risk Mitigation Strategies		
<i>Feasibility study to select the most promising products (cost/benefit)</i>		
<i>“mass balance” on empty containers would show extent of black market / fraud.</i>		
<i>Revenues to be recycled to farmers to the extent possible – through training, subsidies for substitute products or cash refunds on a per Ha basis (through land tax?)</i>		

New Economic instruments

14. Local Tourism tax

Summary		
<i>Proposal</i>		<i>Modify / add to the Issyk-Kul Biosphere tax to account for tourist numbers, duration of stay, seasonality</i>
Economic purpose		Smooth demand for visits to Issyk-Kul, capture pollution externalities from visitors and also recover costs of services by water and environmental infrastructure consumed by visitors
Financial purpose		General Revenue (or, ideally local revenue)
Legal / Institutional changes	✓	Collection mechanisms exist, By-law may need updating?

New Economic instruments

14. Local Tourism tax

Implementation Risks		
Affordability	✓	No impact, provided costs are kept below a level that influences decision to visit.
Effectiveness	✗	Depends on existing tax collection efficiency.
	✗	If costs are low enough not to impact on elasticity of aggregate demand, then they may not smooth peak demand
Political	✗	May be some resistance from resort owners if demand is depressed.
	✓	Tourists don't vote.
Risk Mitigation Strategies		

Tax can be paid in advance, online, at a discount compared to paying in cash on entry

Revenues should be applied for visible, environmental protection measures at tourist locations.



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Next steps?

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Next steps

Final Report and Recommendations – timetable.

- Feedback from meeting (English and Russian)
- 2 weeks for the Translation & proof reading of Draft Final Report with feedback from meeting (early May)
- 3 weeks for comments in writing (Russian and English version)
- 2 weeks for finalisation (mid June)
- Presentation at the EUWI EECCA WG meeting on 02 July 2012 (by Mr Uzakbaev – tbc)
- Production (with other partners) of a memorandum for Government of the Kyrgyz Republic on behalf of the Chairman of the NPD
- Follow-up Project