

Explaining success and failure in international river basin management

Lessons from Southern Africa

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I Southern Africa and the challenge of international river basin management (2)

- Southern African Water Crisis \Rightarrow existing problem solving efforts are of great importance
- Research question: ... *we ask if and how these initiatives have provided guidance for the resolution of transboundary problems along international waterways*
- (1) To what extent have the existing institutions been successful in resolving the problems that prompted their creation?
- (2) And what are the pathways to success and failure in the managing of international rivers?
 - Under which conditions are the riparian states prepared to form institutions to address transboundary problems?
 - And what are the determinants of the effectiveness of those institutions?

II The research framework - basic concepts

- Literature on international river basin management is so far highly descriptive and characterised by theoretical deficits
- Research framework is constructed against the theoretical background of *regime analysis*
- „Water regimes“
 - ⇒ *norm- and rule-based cooperation to reduce the conflict potential, caused by the use, pollution or division of transboundary water resources*
- Water regime formation and effectiveness as dependent variables
- Independent variables???

II The research framework – drivers of water regime formation

Problem factors

- *Transboundary externalities* (of negative or positive nature) vs. *collective problems*
- Amount of problem pressure involved

Process factors

- Mechanisms to balance incentive structures (direct or indirect cost incentives)
- Instruments to reduce the transaction costs of regime formation (information and negotiation costs)

II The research framework – drivers of water regime effectiveness

Institutional factors

- Specificity
- Feasibility
- Flexibility
- Centralised organization structure
- Openness

Country-specific factors

- Economic-technological capacities
- Political-institutional capacities

Factors of international context

- State of bilateral relations between regime members
- Influence of international organisations
- Influence of non-state actors networks

Problem factors

Process factors

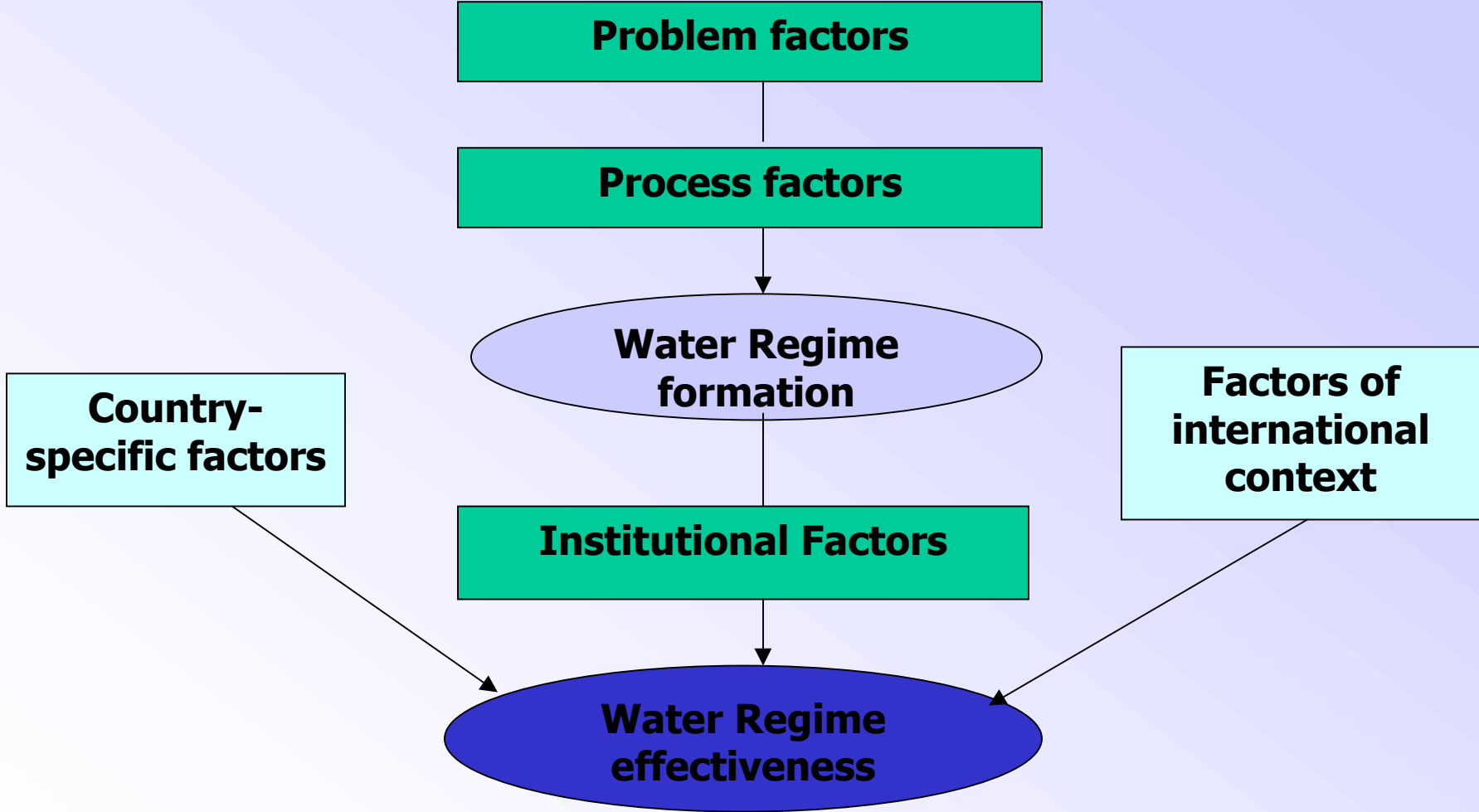
Water Regime formation

Institutional Factors

Country-specific factors

Factors of international context

Water Regime effectiveness



II The research framework – methodological considerations

- Qualitative case studies
- „Structured, focused comparison“ (George und McKeown 1985)
- Process tracing
- Criteria for case selection
- Database

III Southern African case studies

- The Permanent Water Commission on the Okavango River Basin (OKACOM)
- The Action Plan for the Environmentally Sound Management of the Common Zambezi River System (ZACPLAN)
- The Zambezi River Authority (ZRA)
- The Lesotho Highlands Water Project (LHWP)

IV Conclusions – the role of problem factors

The incentive structure of a given problem does matter

- Asymmetric interests in the case of the ZACPLAN and the OKACOM have made cooperation cumbersome and slow
- In the case of the ZRA, the existence of a collective problem – power shortages in Zambia und Zimbabwe – has facilitated cooperation

But: Incentive structures are only the basis of the policy process and do not determine its outcomes

- As the case of the ZRA shows, interests are never fully symmetric
- In the case of the LHWP, a positive externality was transformed into far-reaching cooperation between Lesotho and South Africa

Problem pressure seems to be a highly relevant variable

- High problem pressure in South Africa - increasing water scarcity - was a driving force behind the LHWP
- The absence of problem pressure in the Zambezi Basin is an important reason for the failure of the ZACPLAN
- Is pro-active river basin management bound to fail?

IV Conclusions – the role of process factors

Mechanisms to balance incentive structures

- Empirical evidence of cost incentives is limited to the case of the LHWP: the exchange of water against royalties and electricity makes the water regime a „win-win-situation“

Instruments to reduce transaction costs

- Information costs are usually reduced through common feasibility studies
- The most common instruments to reduce negotiation costs include mediation by international organizations or consultants or confidence-building meetings at the technical level

BUT: Situational events are crucial: „post-apartheid democratic moment (OKACOM), AMCEN (ZACPLAN), regime change (LHWP)

IV Conclusions – the role of institutional factors

Specificity enhances regime effectiveness

- In contrast to the ZACPLAN, LHWP and ZRA contain detailed and specific provisions that structure the relevant actors' behaviour

Integrated management approaches tend to compromise the feasibility of a water regime

- ZACPLAN: In the light of scarce resources, overly ambitious and complex management schemes do not seem feasible

Water regimes should allow for flexible solutions

- LHWP

Effective water regimes need a centralized organizational structure

- ZACPLAN and OKACOM lack an institutional home, e.g. a river basin secretariat

Openness???

IV Conclusions – the role of country-specific factors

Capacity matters

- ZACPLAN and OKACOM (especially Angola): Technical, financial and administrative capacity deficits of national water sectors
- High capacity of South African Department of Water Affairs (DWAf)

The problem of political instability

- Almost of all of countries under investigation are marked by political instability and or civil unrest (e.g. Zimbabwe)
- OKACOM: The part of the river basin in Angola – until 2002 controlled by the UNITA - is still littered with landmines and therefore largely inaccessible which compromises the generation of hydrological data

IV Conclusions – the role of factors of international context

A political climate marked by historically rooted fear and suspicion has compromised water cooperation

- ZRA and LHWP

International organizations play an important role

- ZACPLAN: UNEP and nordic donors
- OKACOM: GEF, FAO and UNDP
- LHWP: World Bank

The impact of non-state actors

- The Okavango as an „internationalized river basin“
- Do effective water regimes require a minimum of public debate and civil participation (ZACPLAN)?

V Relevance of findings

- Findings offer some valuable insight into the conditions for success of international river basin management
- Especially the integration of country-specific and contextual factors has proved to be of particular interest and should be further developed
- Policy advice
 - Focus on capacity-building
 - Caution with respect to the today omnipresent claims for integrated river basin management – especially in the context of developing countries

Thank you for your attention!



Lindemann, Stefan (2005): Erfolgsbedingungen von internationalem Flussmanagement: Der Fall des Südlichen Afrikas, in: Kipping, Martin / Lindemann, Stefan: Konflikte und Kooperation um Wasser - Wasserpolitik am Senegalfluss und internationales Flussmanagement im Südlichen Afrika, Lit-Verlag, Münster, S. 108-234.