



training course on “Tools for River Basin Management” offered to the stakeholders in Da Nang (ITT, OticProduction)

## Vu Gia Thu Bon River Basin Information Centre (Вьетнам)

Trung tâm thông tin lưu vực sông VGTB (Vietnamese)

### ТОДОРХОЙЛОЛТ

**The VGTB River Basin Information Centre (RBIC) offers decision support tools for stakeholders and aims at providing comprehensive information and consulting services to the water and land users according to their demands.**

**Aims / objectives:** Sufficient and sustainable water resource management at river basin scale can only be achieved if it is based on dialogue between all relevant stakeholders, and supported by adequate data. It follows then, that a robust system of monitoring, evaluation, reporting and communication is needed. The lack of appropriate management strategies which would bring these tools together has been underlined by stakeholders, and observed by researchers, involved in the research project LUCCI - Land Use and Climate Change Interactions in the VGTB River Basin. In order to offer a comprehensive decision-making support system, based on scientific knowledge and research results, the Institute for Technology and Resources Management (ITT, TH Köln, Germany) in cooperation with the Vietnam Academy for Water Resources (VAWR, Hanoi, Vietnam) established the VGTB River Basin Information Centre in Da Nang. The overall objective of RBIC is to support efficient and sustainable water and land use. The support provided for the implementation of the water saving technology for paddy systems is one of the services offered by the centre.

**Methods:** The VGTB RBIC is an independent, local institution administrated by the German and Vietnamese coordinators of LUCCI, financed by project sources and located at the Central Department of the Vietnam Academy of Water Resources in Da Nang. As a scientific organization, the VGTB RBIC provides the advantages of impartiality, a detailed knowledge base and a broad interdisciplinary perspective. Through different dissemination activities, such as visits to relevant institutions, information material (brochures, flyers in Vietnamese) as well as training courses and capacity building measures, the relevant stakeholders are well-informed about the activities of the Information Centre. On demand, the following products and services are provided in the VGTB-RBIC: (a) Thematic maps on land use, hydrology and river basin development; (b) A comprehensive database of the VGTB river basin (VGTB RBIS - River Basin Information System, open source) (c) VGTB State of the Basin Report as a decision-support instrument: the report was prepared by the LUCCI research team and provides relevant information on climatic, environmental and socioeconomic data and trends; (d) Hydro-meteorological, hydrograph and salinity data; (e) Flood and drought risk assessment; (f) Scenarios and modelling (reservoir operation, salinity intrusion, irrigation management scenarios); (g) Organization of meetings and discussions on key issues of the development of the VGTB; (f) Training and capacity building services related to the demands of stakeholders.

**Role of stakeholders:** Thus a heterogeneous stakeholder platform has been established in the case study region that includes scientific institutions, policy makers, public administration representatives as well as private sector companies. It is clear that the major problems of the VGTB River Basin can be only addressed, and adequate solutions identified, if based on active cross-sectoral stakeholder participation. Therefore, the interaction among

### БАЙРШИЛ

**Байршил:** Central Vietnam, Da Nang, Вьетнам

**Сонгосон байршуудын газарзүйн холболт**

- тодорхойгүй

**Эхлэх огноо:** 2013

**Төгсөх жил:** 2015

**Арга барилын төрөл**

- ☐ уламжлалт / уугуул
- ☐ Сүүлийн үеийн орон нутгийн санаачлага / шинэчлэл
- ☒ төсөл / хөтөлбөр дээр үндэслэсэн



stakeholders and RBIC plays a key role: the services are offered for the stakeholders, and stakeholder feedback is the basis for providing adequate information services and conducting applied based research.



Stakeholder meeting organized by River Basin Information Centre, RBIC (ITT, LUCCI project)



Training course on "Tools for River Basin Management" offered to the stakeholders in Da Nang (ITT, OticProduction)

## АРГА БАРИЛЫН ЗОРИЛГО БА ЭЭРЭГ НӨЛӨӨ

### Арга барилын үндсэн зорилго, зорилт

The Approach focused mainly on other activities than SLM (Water management, agriculture, irrigation, water availability: support the local water users in the implementation of adequate water management strategies)

1. Establish a communication platform to discuss water and land use related problems, and create transparency among water users.
2. Support and foster the science-policy-society dialogue offering a cross-sectoral neutral space for discussion, consulting and capacity building for all stakeholders and water users (farmers, decision-makers, public institutions, private sector companies).
3. Provide a comprehensive information service and decision support system to stakeholders according to their demands. The following specific products and services are provided by the VGTB-RBIC: Thematic maps on land uses, hydrology and river basin development • Comprehensive database of the VGTB river basin (VGTB RBIS - River Basin Information System, open source) • VGTB State of the Basin Report as a decision support instrument: the report was prepared by the LUCCI research team and provides relevant information on climatic, environmental and socioeconomic data and trends • Hydro-meteorological, hydrograph and salinity data • Flood and drought risk assessment • Scenarios and modelling (reservoir operation, salinity intrusion, irrigation management scenarios) • Organization of meetings and discussions on key issues of the development of the VGTB • Training and capacity building services related to the demands of stakeholders.

The SLM Approach addressed the following problems: The lack of communication between the relevant institutions and water users, the demand for comprehensive decision-support instruments, difficulties with data availability - typically distributed and available at different institutions, as well as conflicts over resource use, were the main problems addressed by the approach. The conflicts caused by the rapid expansion of hydropower since 2008 in the VGTB river basin have especially demonstrated the inadequate participation of local stakeholders in planning processes. Hydropower development has adverse effects on downstream water availability, especially during the dry season, affecting drinking water supply and irrigation.

### Тухайн Арга барилын хүрээнд нэвтрүүлсэн Технологийг хэрэгжүүлэхэд дэмжлэг болох нөхцлүүд

### Тухайн Арга барилын хүрээнд нэвтрүүлсэн Технологийг хэрэгжүүлэхэд хүндрэл учруулах нөхцлүүд

- **Бүтэц зохион байгуулалт:** Lack of communication between the institutions and inadequate stakeholder involvement in the decision making process. Treatment through the SLM Approach: VGTB RBIC offers a cross sectoral communication platform and bring together all relevant stakeholders: organization of workshops and meetings as well as visits to the relevant institutions.
- **ГТМ-ийн талаарх мэдлэг, техникийн дэмжлэг авах боломж:** A robust system of monitoring system was missed in the region: hydro-meteorological data, monitoring of water quantity. Treatment through the SLM Approach: A monitoring network has been established as part of the LUCCI project.
- **Бусад:** Lack of information about the river basin in order to ensure an adequate decision making. Treatment through the SLM Approach: A "State of the Basin Report" including all available data and information about the river basin has been elaborated (climatic, environmental, hydrological, land use and socioeconomic data and trends); River Basin Information System: Comprehensive data base of the VGTB river basin through the open source VGTB River Basin Information System.

## ТАЛУУДЫН ОРОЛЦОО БА ҮҮРЭГ

### Арга барилд оролцогч талууд болон тэдгээрийн үүрэг

Ямар оролцогч талууд / хэрэгжүүлэгч байгууллагууд арга барилд оролцож байсан бэ?	Оролцогч талуудыг тодорхойлно уу	Оролцогч талуудын үүргийг тайлбарлана уу
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Судлаачид	National and international researchers involved in the LUCCI project	
ТББ	Authorities of a Water Management Unit (WMU)	
Засгийн газар (шийдвэр гаргагч, төлөвлөгч)	Regional relevant institutions (DONRE, MARD, PPC Quang Nam)	
Олон улсын байгууллага		

## Арга барилын янз бүрийн үе шатанд орон нутгийн газар ашиглагчид / бүлгүүдийг татан оролцуулах

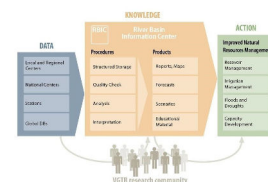
	Үгүй идэвхигүй Гадаад дэмжлэг интерактив өөрийн хүчийг нэгтгэсэн	
санаачлага/идэвхжүүлэлт Төлөвлөгөө	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Stakeholder analysis (including of all interested groups) Local and regional decision makers are involved: workshops, discussions and surveys in order to collect relevant socio-economic and land use data, identify research demand and challenges Land user decide on whether and which technologies they want to implement.
Хэрэгжилт	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	
Мониторинг/ үнэлгээ Research	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Land users provide relevant information and data on their farms (size, yields) for research purposes. 'Aims/Objectives' elaborated and prepared for the stakeholders by Vietnamese and international researchers based on scientific results and data from land users.

## Арга барил хэрэгжүүлэх бүдүүвч

The services of the VGTB Info-Centre are provided by a team of researchers and experts from national and international institutions. The services and products are offered to the following target groups: Public administration and decision-makers in Central Vietnam, Land and water users, researchers, and private sector companies in the field of water and land management (e.g. irrigation, hydropower construction)

Interaction and communication between the groups involved:

- based on stakeholders and target groups' feedback, the centre can provide services suited to the needs of the regional institutions, considering current socioeconomic development and environmental changes in the river basin
- the centre provides a communication platform for the target groups involved from different sectors: private companies, public administration, researchers, land and water users.



## ГТМ-ийн технологи сонгох шийдвэр гаргах явц

Шийдвэр гаргасан этгээд

- ☐ Газар ашиглагч дангаараа (өөрийн санаачлага)
- ☐ ГТМ-ийн мэргэжилтнүүдийн дэмжлэгтэйгээр, голчлон газар ашиглагчид
- ☐ оролцооны зарчмын хэсэг болох бүх холбогдох талууд
- ☒ голдуу ГТМ-ийн мэргэжилтнүүд, газар ашиглагчидтай зөвлөлдсөний үндсэн дээр
- ☐ ГТМ-ийн мэргэжилтэн дангаараа
- ☐ улс төрчид / удирдагчид

Шийдвэр гаргах үндэслэл нь

- ☐ ГТМ-ийн мэдлэгийг баримтжуулалтын үнэлгээ (нотолгоонд суурилсан шийдвэр гаргах)
- ☐ Судалгааны үр дүн, ололтууд
- ☐ Хувь хүний туршлага ба санал бодол (баримтжуулаагүй)

## ТЕХНИКИЙН ТУСЛАЛЦАА, ЧАДАВХИ БИЙ БОЛГОХ БОЛОН МЭДЛЭГИЙН МЕНЕЖМЕНТ

Дараах үйл ажиллагаа эсвэл үйлчилгээ нь арга барилын нэг хэсэг болсон

- ☒ Чадавхи бэхжүүлэх/сургалт
- ☒ Зөвлөх үйлчилгээ
- ☒ Институцийг бэхжүүлэх (байгууллагын хөгжил)
- ☒ Мониторинг ба үнэлгээ
- ☒ Судалгаа

## Чадавхи бэхжүүлэх / сургалт

Дараах сонирхогч талуудад сургалт хийсэн

- ☐ Газар ашиглагчид
- ☐ хээрийн ажилтан / зөвлөх
- ☒ decision makers/ experts/ local scientists

Сургалтын хэлбэр

- ☐ Ажил дээр
- ☐ фермерээс -фермер
- ☒ үзүүлэнгийн талбай
- ☐ Олон нийтийн уулзалт
- ☐ курс дамжаа

Хамарсан сэдэв

key aspects of an integrated river basin management (monitoring, data management and hydrological modelling); current situation, development and challenges in the VGTB river basin; training on adequate tools and technologies (alternative irrigation strategies for paddy fields: reuse of return flow)

## Зөвлөх үйлчилгээ

### Зөвлөх үйлчилгээ үзүүлсэн

- ☐ Газар ашиглагчийн талбай дээр
- ☒ Тогтмол төвд

Name of method used for advisory service: River Basin Information Center - RBIC; Key elements: Stakeholder Workshops, Trainings on alternative irrigation strategies for paddy fields: reuse of return flow

Advisory service is very adequate to ensure the continuation of land conservation activities; Researchers (VAWR): can offer trainings and conduct dissemination activities; Local institutions (e.g. People's Committee of Quang Nam Province): training, dissemination activities, financial support

## Институцийг бэхжүүлэх

### Институци бэхжисэн / бий болсон

- ☐ Үгүй
- ☐ Тийм, бага
- ☐ Тийм, дунд зэрэг
- ☒ Тийм, маш их

### дараах түвшинд

- ☒ Орон нутгийн
- ☐ Бүс нутгийн
- ☐ Үндэсний

### Байгууллага, үүрэг, хариуцлага, гишүүд зэргийг тодорхойлно уу.

### Дэмжлэгийн төрөл

- ☐ Санхүүгийн
- ☒ чадавхи бэхжүүлэх / сургалт
- ☐ Тоног төхөөрөмж
- ☒ research

### Дэлгэрэнгүй мэдээлэл

Training for decision makers and professionals; Research: hydrological modeling

## Мониторинг ба үнэлгээ

management of Approach aspects were ad hoc monitored by project staff through observations management of Approach aspects were ad hoc monitored by project staff through measurements There were several changes in the Approach as a result of monitoring and evaluation: The approach was based on the stakeholder-research interactions. The approach objectives and methodology was adapted to the local conditions and challenges. There were no changes in the Technology as a result of monitoring and evaluation

## Судалгаа

Судалгаа нь дараах сэдвийг хамарсан

- ☒ Социологи
- ☐ Эдийн засаг/ зах зээл
- ☐ Экологи
- ☒ Технологи
- ☒ hydrological modeling

The implementation of return flow from paddy fields as alternative irrigation technology under local conditions was performed under the framework of LUCCI project (ITT).

Research was carried out both on station and on-farm

## САНХҮҮЖИЛТ БОЛОН ХӨНДЛӨНГИЙН МАТЕРИАЛЛАГ ДЭМЖЛЭГ

### ГТМ-ийн бүрэлдэхүүн хэсгийн жилийн төсөв ам.доллараар

- ☒ < 2,000
- ☐ 2,000-10,000
- ☐ 10,000-100,000
- ☐ 100,000-1,000,000
- ☐ > 1,000,000

Precise annual budget: тодорхойгүй

Approach costs were met by the following donors: international (International (German Federal Ministry of Education and Research, BMBF)): 70.0%; government (National (Vietnam Academy for Water Resources, VAWR) ): 30.0%

### Газар ашиглагч нарт дараах урамшуулал, үйлчилгээг үзүүлсэн

- ☐ Газар ашиглагчдад санхүүгийн / материаллаг дэмжлэг үзүүлсэн
- ☐ Тодорхой хөрөнгө оруулалтанд нөхөн олговор олгох
- ☐ Кредит
- ☐ Бусад урамшуулал, хэрэгсэл

## НӨЛӨӨЛЛИЙН ДҮН ШИНЖИЛГЭЭ БА ДҮГНЭЛТ

### Арга барилын үр нөлөө

Арга барил нь ГТМ-ийн технологийг хэрэгжүүлж, хадгалахад газар ашиглагчдад тусласан уу?  
Decreased water use; efficient resource management

- Үгүй
- ☒ Тийм, бага зэрэг
- ☐ Тийм, зарим
- ☐ Тийм, их

Арга барил нь эмзэг бүлгийнхнийг нийгэм, эдийн засгийн хувьд чадавхижуулсан уу?

- ☒
- ☐
- ☐

Did other land users / projects adopt the Approach?

- ☒
- ☐
- ☐

### Газар ашиглагчид ГТМ хэрэгжүүлэх болсон үндсэн шалтгаан

- ☒ үйлдвэрлэл нэмэгдсэн
- ☐ Ашиг нэмэгдсэн (боломж), зардал-үр ашгийн харьцаа сайжирсан
- ☐ Газрын доройтол буурсан
- ☐ Гамшигийн эрсдэл буурсан
- ☐ Ажлын ачаалал бууруулсан
- ☐ төлбөр / татаас
- ☐ дүрэм журам (торгууль) / сахиулах
- ☐ нэр хүнд, нийгмийн дарамт / нийгмийн холбоо
- ☐ Сүлжээ/ бүлэг төсөл/ хөдөлгөөнд гишүүнээр элсүүлэх
- ☐ Байгаль орчны ухамсар
- ☐ зан заншил, ёс суртахуун

### Арга барилын хүрээнд хэрэгжүүлсэн үйл ажиллагааны тогтвортой байдал

Газар ашиглагчид арга барилаар дамжуулан хэрэгжүүлсэн арга хэмжээг тогтвортой үргэлжлүүлж чадах уу (гадны дэмжлэггүйгээр)?

- ☐ Үгүй
- ☒ Тийм
- ☐ Тодорхойгүй



## ДҮГНЭЛТ, СУРГАМЖ

### Давуу тал: газар ашиглагчийн бодлоор

#### Давуу тал: эмхэтгэгч эсвэл бусад мэдээлэл өгсөн хүмүүсийн бодлоор

- The approach is managed by researchers. This has the advantages of impartiality, a detailed knowledge base and a broad interdisciplinary perspective.
- Adaptability to stakeholders needs. (How to sustain/ enhance this strength: Strong interaction between the management of the VGTB RBIC and regional stakeholders is necessary: organize regular meetings and workshops; Stakeholders regularly inform the centre about their information requirements.)
- Monitoring, evaluation, reporting and communication are integrated, summarized and carried out by one institution.

### Сул тал/ дутагдал / эрсдэл: газар ашиглагчийн

#### бодлоордаван туулах боломжууд

- It needs long-term commitment from research, from extension, and from the government to support such a service for the benefit of all people and the environment.

### Сул тал/ дутагдал / эрсдэл: эмхэтгэгч эсвэл бусад мэдээлэл өгсөн хүмүүсийн бодлоордаван туулах боломжууд

- The VGTB RBIC is a new institution, unknown to the local stakeholders. Provide dissemination activities and trainings in order to explain the decision making process and the role of VGTB RBIC as support instrument.
- The approach was developed as part of a research project. There is the risk, that the scale of activities and services will be reduced after the end of the project duration. Try to obtain financial resources by the local and public institutions in order to develop and manage the center after the end of the project.

## СУУРЬ МЭДЭЭЛЭЛҮҮД

### Эмхэтгэгч

Justyna Sycz

### Хянан тохиолдуулагчид

### Хянагч

Fabian Ottiger  
Deborah Niggli

Баримтжуулсан огноо: 28 7-р сар 2015

Сүүлийн шинэчлэл: 04 4-р сар 2018

### Мэдээлэл өгсөн хүн

Justyna Sycz (justyna.sycz@fh-koeln.de) - ГТМ мэргэжилтэн  
Alexandra Nauditt (alexandra.nauditt@th-koeln.de) - ГТМ мэргэжилтэн  
Lars Ribbe (lars.ribbe@th-koeln.de) - ГТМ мэргэжилтэн  
Phong Nguyen (phongicd@gmail.com) - ГТМ мэргэжилтэн

### WOCAT мэдээллийн сан дахь бүрэн тодорхойлолт

[https://qcat.wocat.net/mn/wocat/approaches/view/approaches\\_2536/](https://qcat.wocat.net/mn/wocat/approaches/view/approaches_2536/)

### Холбогдох ГТМ мэдээлэл

Technologies: Water saving through reuse of return flow in paddy fields [https://qcat.wocat.net/mn/wocat/technologies/view/technologies\\_1277/](https://qcat.wocat.net/mn/wocat/technologies/view/technologies_1277/)  
Technologies: Water saving through reuse of return flow in paddy fields [https://qcat.wocat.net/mn/wocat/technologies/view/technologies\\_1277/](https://qcat.wocat.net/mn/wocat/technologies/view/technologies_1277/)

### Баримтжуулалтыг зохион байгуулсан

#### Байгууллага

- University of Applied Science, TH Köln (TH Köln) - Герман
- Vietnam Academy for Water Resources (VAWR) - Вьетнам

#### Төсөл

- Book project: Making sense of research for sustainable land management (GLUES)

### Гол сурвалж баримт сэлт

- Ribbe, L., Viet, Quoc Trinh, ABM Firoz, Anh Thu Nguyen, Uyen Nguyen, Alexandra Nauditt (2016) Integrated River Basin Management in the Vu Gia Thu Bon Basin: Nauditt, Ribbe (editors) Land Use and Climate Change Interaction in Central Vietnam, Springer Book Series Water Resources Management and Development

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