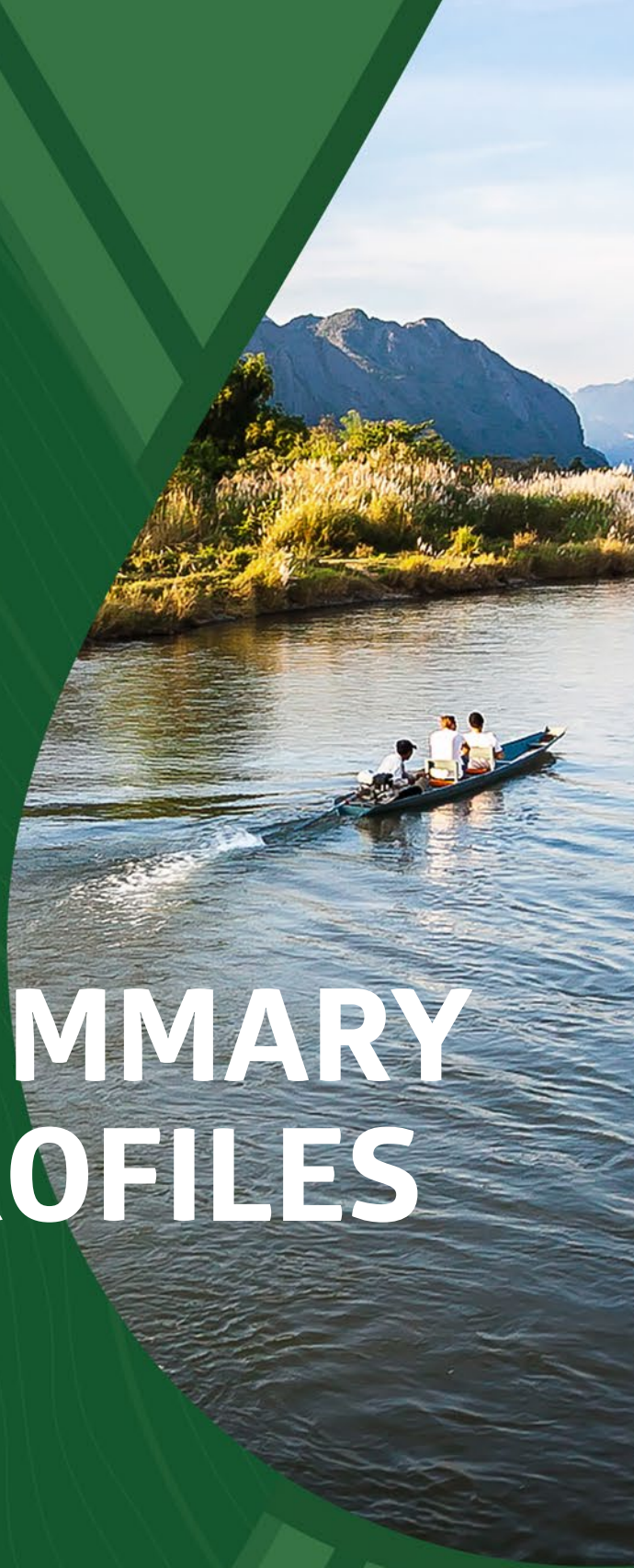
SUMERNET 4 All Projects



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SUMMARY PROFILES

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01 Pathways for rights-based approaches in Mekong hydropower

Strengthening pathways for rights-based approaches in Mekong hydropower : Towards inclusive and sustainable growth

Abstract

Hydropower development contributes significantly to economic growth. How benefits from this growth can be distributed more equitably while ensuring that the rights of those most directly affected by the dam project, including the poorest and most marginalized groups within the community (by gender and ethnicity), are protected is key for sustainable growth and inclusive development. Strengthening rights-based approaches in hydropower decision making is crucial to ensure that hydropower development also contributes to sustainable growth and inclusive development. The project will look at how current approaches and institutional set up in hydropower development (regionally, nationally, locally) set the pretext for alternative pathways for strengthening rights-based approaches in water governance in general and with regard to hydropower decision making in particular. It aims to identify pathways to strengthen rights-based approaches in hydropower decision making across scales. In particular, it will: 1) unpack local community's views on water (in)security and strategies to strengthen their water rights towards equitable access to water; and 2) connect these views and strategies with formal hydropower decision-making structures, processes, and practices at national and transboundary level. Bringing to light the important role played by local community in bridging the current disjuncture in hydropower decision making across scales, the project will incorporate gender, social equity and social justice lenses in the overall analysis.

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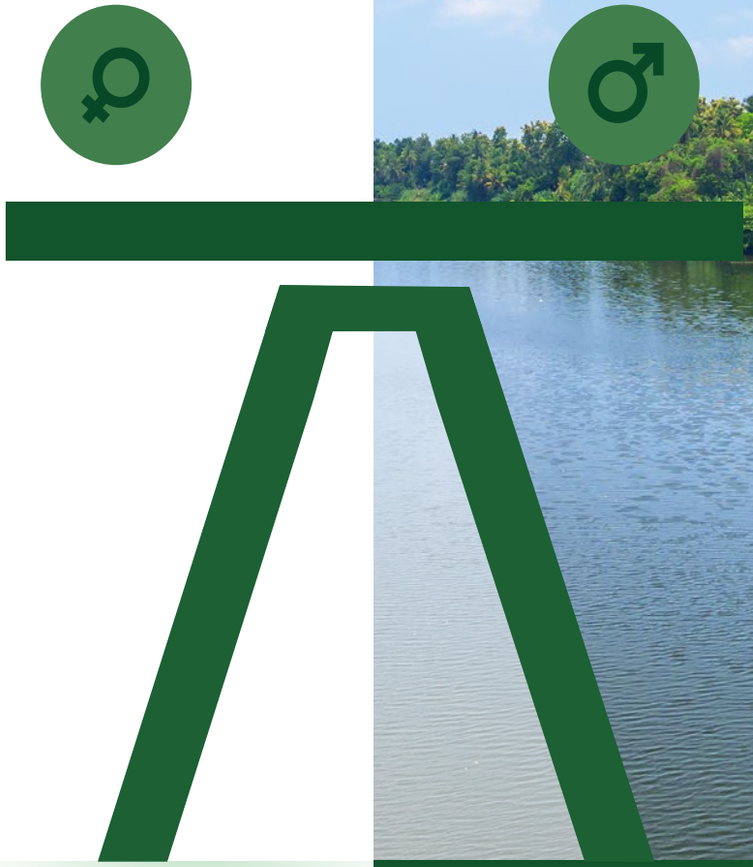
02 **BRIMOFOT**

Bringing more than food to the table: precipitating meaningful change in gender and social equity-focused participation in transboundary Mekong Delta wetlands management



Abstract

The importance of healthy, functioning wetlands ecosystems in support of rural livelihoods in the Mekong Basin is generally well understood and documented over many years. A less well understood aspect are the conditions and factors that lead to the under-representation of certain social groups in water and wetlands decision-making processes and institutions. The groups most often recognised to be routinely under-represented (both quantitatively and qualitatively), marginalised or excluded from these governance processes have been women, ethnic minorities and poorer groups within society. This project aims to research the obstacles to and conditions surrounding the participation of women and other marginalised groups in decision-making platforms for improved wetlands resources management, which ultimately should lead to more socially-equitable water governance outcomes in the transboundary Mekong Delta.

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03 **Knowing Salween**

Knowing water: The Salween River's multiple meanings and multi-scaled policy implications for water security

Abstract

This research will deepen understanding of the multiple meanings of water amongst indigenous communities on the Salween River, and examine its implications for water policies at the local, sub-national, national and transboundary level. The research is proposed to be conducted over 24 months. Our research is at three sites connected through their relationship with the Salween River and its transboundary governance: Daw La Lake that directly connects to the Salween River in Karen State, Myanmar; The Kunhing (Thousand Islands) complex on the Nam Pang River, a major tributary of the Salween River in Shan State, Myanmar; and Sob Moei village, Mae Sam Lab village and Tha Ta Fang village in Mae Hong Son province, Thailand.

Overall, the research will utilize transdisciplinary research methods which bring together academic researchers, civil society, and community leaders to co-produce research. For the case study research, broadly we will adopt an ethnographic approach. The intention is to reveal the multiple meanings and values of water through observation of customary practices and regulations, and how they are linked or connected to local water-based ecosystems.

The overarching expected outcome of the project is to further the recognition of ethnic community meanings and values of water and related resources in to national policy and law in Myanmar and Thailand through empowering community leaders, building understanding amongst policy makers, and generating empirical evidence and conceptual insights that can help inform these policies and laws. We also intend our work to contribute towards Myanmar's peace process.

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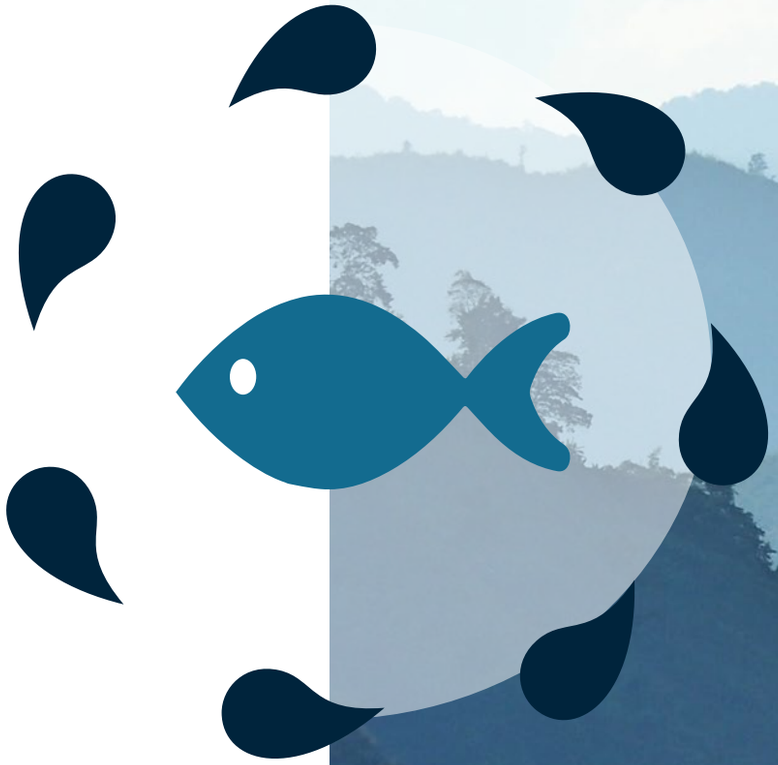
04 ENAHA

Enhancing aquatic habitats in upland environments

Abstract

The project purpose is to undertake research designed to address water insecurity in the upland areas of Laos and Cambodia where limited water resources have a direct impact on the food systems essential for achieving food security. For upland areas, water insecurity affects the successful reproduction of aquatic organisms commonly used as foods. Erratic rainfall and short periods of drought can substantially reduce reproduction success of aquatic organisms, especially in the highlands which are already severely challenges by the physical nature of the terrain directly leading to food insecurity of human populations. The upland areas are particularly challenged as rain quickly drains off slopes reducing the capacity of aquatic organisms to complete their life cycles. The Lao PDR is very vulnerable to natural disasters, including extreme weather events which have been increasing in frequency and intensity. Similar weather events have been affecting Cambodia. Among the lower Mekong Basin countries, Laos and Cambodia have been identified as the most vulnerable, in part because of their limited capacity to cope with climate related risks.



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05 VICA

Collaborating water management for small-scale hydropower dams in Vietnam, Lao PDR and Cambodia

Abstract

Given current situation of rapid economic development in Mekong Region Countries, their power demand is projected to be risen about 10% annually in the period of 2010 to 2030. To meet this energy demand, there has been several hydropower dams constructed, in which hundreds of small-scale hydropower plants constructed in the tributaries of Mekong. In reality of its operation in Vietnam, Laos and Cambodia, the small-scale hydropower dams have caused negative impacts on environment and water insecurity such as unequal water allocation, changing natural habitats, drought and floods, changing land use pattern, poverty and livelihoods of households, particularly that of the poor, ethnic minority groups and women-headed households.

Reviewing current literatures regarding issues on hydropower dams and water management in Mekong Region pointed to the fact there has been no study touching the issue on collaborating water management for small-scale hydropower dam between hydropower dam owners, local communities and government. Thus, this project will lead to original and significant scholarly results and address the water insecurity issues relating to water resource allocation and management in small-scale hydropower dams and to providing policy implications for establishment of collaborating water allocation and management for small-scale hydropower dams in Viet Nam, Laos and Cambodia.

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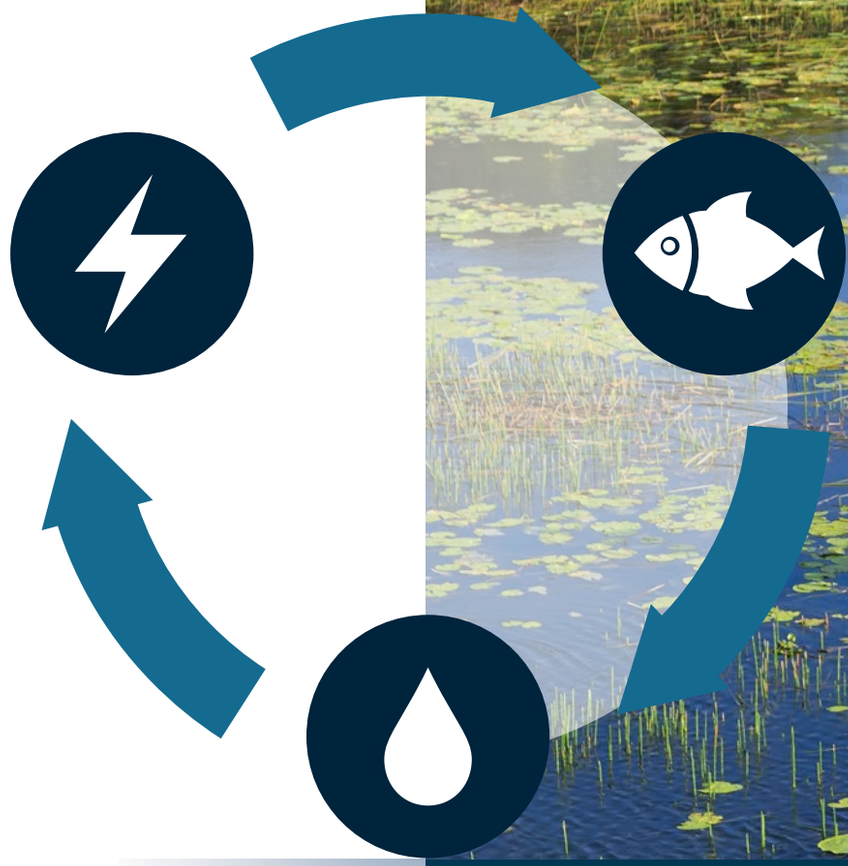
06 Wetlands for Water Security

The role of wetlands in water security for the Mekong Region



Abstract

Wetlands are highly important to the food-energy-water nexus of the Mekong region. Rural water security is of specific interest for Mekong-region countries because major rural economic sectors of all countries, especially agriculture and aquaculture, as well as main sources of water for rural household consumption and public water supply, depend on water from wetlands. Many of the most affected people, especially women, children, and senior citizens, are vulnerable groups because of close coupling between wetlands and livelihoods, and thus this project is aligned with the SUMERNET 4 All priority "water access, rights and allocation in times of water insecurity." In preparation for impacts from global change and intensifying water management in the Mekong region, quantification of ecosystem services from wetlands is needed. Our specific interest in this proposed work is the role of wetlands for water security. The specific objectives of this research are to determine, for a cross-section of wetland types in the Mekong region, how water budgets and water quality provide ecosystem services, community relationships with those ecosystem services, and to project the impact of global and regional change on water security for communities through changes in those services.

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07 HCE&RAC

Enhancing the preparedness of rice production to water scarcity in the Lower Mekong Basin : A transdisciplinary approach

Abstract

Rice production has had an enormous influence on food security, water use and human well-being, especially for the case of lower Mekong countries like Cambodia and Vietnam. Water is the single most important component for sustainable rice production, which is not only among the largest water users globally and locally, but also a major source of water pollution. Further, growing water insecurity has been observed in this region and is expected to increase frequency and severity in the near future due to expanding energy generation, population growth, higher food demand, and increasing climate uncertainty.

Currently, various laws and policies related to water resources are being developed to address the problem of water insecurity in Cambodia and Vietnam. Despite the progress, significant gaps remain between policy and practice. The issue of water insecurity in agricultural production, especially rice production in lower Mekong countries, including Vietnam and Cambodia, has been highlighted in academic studies, the media, and local, national, regional policy context. Therefore, a better understanding of water scarcity for rice production - the main economic activity of the rural poor in the region - and its impact on farming households is particularly important for the long-term goal of sustainable development.

The overall objective of the project is to enhance the preparedness of rice production to water insecurity by assessing the current and future levels of water use and scarcity for rice production, evaluate its impact and identify policy options that would help address water insecurity in the Lower Mekong river basin. The study contributes to the ongoing SUMERNET effort, feeding in particular into the emerging needs for better policy options in tackling water insecurity in the region.

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08 Deposition

Atmospheric deposition to large river basins and potential effects on the water environment

Abstract

The project findings will fill in the knowledge gap and provide scientific information to policy makers, e.g. showing multiple benefits of the air emission reductions to the river water quality, ecosystems, air quality and climate. It aims to show that the human right to clean air, clean water and climate justice can be safeguarded within a package of policies regulating the atmospheric emission and deposition. The project activities are designed to adequately address the gender and social equality, conflict sensitivity and poverty eradication, following the SUMERNET ethical principles, to achieve the major goal of enhancing water security. This proposed 24-month project focuses on three river basins, Thachin of Thailand, Mekong/Phnom Penh of Cambodia and Dong Nai of Vietnam with involvement of key boundary partners. The findings of the project will be widely communicated to stakeholders. A set of policy recommendations and a policy brief will be produced in English and local languages. A national dissemination workshop will be organized in each country with involvement of policymakers, boundary partners, scientists and other stakeholders. The key findings will also be disseminated to wider public through the SUMERNET website, news article, survey/interview, youth campaign, conferences, and peer-reviewed papers. The project team is led by and composed of equal number of male and female researchers, and the priority will be given to female researchers and stakeholders to take part in the project activities and results dissemination.

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09 AA-Adapt

Strengthening the adaptive capacity and resilience of agriculture and aquaculture-dependent livelihoods: Case studies of selected disaster-prone villages in Vietnam and Myanmar

Abstract

At present, Myanmar and Vietnam face significant challenges in addressing flooding and saltwater intrusion along with the rise of sea level, especially in the delta areas. In both countries, the challenges are still remained similar in term of lack of adaptive capacity, higher population and vulnerable communities, limited technical capacity and knowledge, as well as resources for the development and implementation of adaptation plans. The research will focus on these barriers and issues and study on what are the differences in term of climate change vulnerability and adaptation to water insecurity problems in delta areas of Myanmar and Vietnam.

This study will provide strategic implementation processes and plans for policy makers and development planners of targeted communities and stakeholders involved, and women and ethnic groups as well as provide inputs for Township/regional policy makers and development planners on how to achieve sustainable water management and reduce the conflict between agriculture and aquaculture farmers in their areas. Furthermore, this study will disseminate a number of publications/ journals/ media publications/ policy brief in local languages so that policy makers and development planners could articulate the necessary implementation processes.

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10 Sustainable and inclusive groundwater use for agriculture in the Mekong

Identifying barriers to sustainable and inclusive groundwater use for marginalized rural communities in the Mekong Region

Abstract

Groundwater has received some attention in recent years but still must feature more prominently in deliberations and actions geared towards major challenges associated with sustainable development and climate change. This proposed research is premised on the hypothesis that groundwater can play an important role in offsetting water insecurity and alleviating poverty in the Mekong region. Groundwater would provide security and add value for communities situated remote from reliable surface water, particularly due to the extended nature of the dry seasons and growing impacts from climate change in the region. There is likely to be good potential to harness the livelihood-improving benefits of agricultural groundwater use for smallholder farmers, including the most marginalized and socially vulnerable groups according to current knowledge of groundwater systems in the Mekong and development experience from other regions. Achieving this is contingent upon the formulation and adoption of appropriate policies sensitive to gender and equity.

Working across Lao PDR and Cambodia, two Least Developed Countries where the needs for groundwater for agricultural development are great, case study sites would be identified in prospective areas where the groundwater potential appears favorable and the actual or potential demand for groundwater by local communities is strong. Operationally, the proposed project would run for 24 months, divided into a 4-month inception phase followed by a 20 month implementation phase. The implementation phase involves activities geared around understanding the situation and needs in detail, validating priority issues/opportunities and preparing/disseminating recommendations for policy, implementation strategies and future research. The preceding inception phase is designed to initiate interactions with project and boundary partners, and fine tune plans and study sites. The project would be participatory in nature, working with various local community groups (including marginal groups) and authorities.

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11 IODA-LMB

Integrated assessment of domestic water accessibility for vulnerable communities in the Lower Mekong Basin

Abstract

Water insecurity is a complex issue and although there is considerable knowledge of how to incorporate appropriate management measures and strategies into water resources management in provincial and river basin level in order to achieve water security, few actions effectively achieve this on-the-ground. The proposed research project is in excellent alignment with the stated mission of SUMERNET 4, which requires the significance of improved policies and practices in addressing the water insecurity challenges through collaborative research of Lower Mekong Basin countries namely Lao PDR, Thailand and Vietnam. The specific goal of this project is to reduce water insecurity for vulnerable groups in the Lower Mekong Basin through integrated assessment of domestic water accessibility applying water security indicators such as water availability, water quality, domestic water consumption, etc., water accounting and proposing domestic water security policies and strategies based on research findings, and tailored to different settings. Initially, rapid assessment will be conducted in three provinces located in Vietnam, Laos PDR and Thailand for domestic water issues of vulnerable groups including the poor, woman, children, and marginal groups. Then a pilot district in each province will be selected for conducting integrated assessment of domestic water accessibility for vulnerable and marginal groups. A comparison and evaluation of assessment results across the three countries as well as reducing water insecurity measures will be presented, leveraging common aspects between cases where possible. Based on research findings, international papers will be developed, and policy briefs will be proposed that address water security enhancement for vulnerable groups with appropriate adaptation measures in the research areas.

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Groundwater Integrated Regional Assessment (GIRA) Projects

01
Groundwater Governance in Lower Mekong Region

01 Groundwater Governance in Lower Mekong Region

Strengthening groundwater governance in rapidly urbanizing areas of the Lower Mekong Region

Abstract

Groundwater plays a crucial role in the water security, poverty reduction and sustainable development of the Mekong region. However, in many countries either the groundwater is under- utilized or over exploited and at the same time affected by multiple stresses such as rapid urbanization, population growth, climate change and climate variability. Lack of good groundwater governance, absence of groundwater policies and laws, groundwater institutions, stakeholders' participation and fragmented groundwater management with other aspects of socio-economic developments led to unsustainable management of groundwater in the Mekong region. The unsustainable management groundwater in the region, especially in rapidly urbanizing areas bring conflict among different sectors and vulnerable population such as poor, marginalized and ethnic people. Therefore, the proposed project aims to evaluate the current state of groundwater governance in the region and recommend ways to improve or strengthen the groundwater governance based on evidence-based understanding of groundwater availability, its use and potential conflicts under multiple stresses in the future.

Four rapidly urbanizing areas of the Lower Mekong Region: Luang Prabang in Lao PDR, Khon Kaen in Thailand, Siem Reap in Cambodia and Ba Ria-Vuong Tau in Vietnam are selected as case study areas in the project. The four areas are rapidly urbanizing areas where groundwater is the major source of water for beneficial uses.

The project, which will run for two years (including inception phase), will employ an integrated assessment approach to address the above research questions. It consists of system analysis to understand the context of groundwater and its use, the interdependences and complexities of the socio-physical system. Participatory and multi-stakeholder consultation/analysis and frame analysis will be used to capture values, interests, preferences, conflicts and interactions of actors regarding groundwater use and management. Similarly, a qualitative methodology such as review of policies, legal and institutional frameworks, reports and peer reviewed articles; interviews of relevant stakeholders will be used to analyze the current state of groundwater governance in national and local level of all areas. The analysis will be focused on whether the institutions and policies consider vulnerable groups, groundwater access as human rights.

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Joint Action Projects

01
Water Savings Innovations & Water Insecurity Reduction – Vietnam Mekong Delta

02
Groundwater Infrastructure Sustainability Assessment (GISA)

03
SERUWA

04
PFRM-Ban Phai

05
SEED-Up

06
Flood Cam

01 Water Savings Innovations & Water Insecurity Reduction – Vietnam Mekong Delta

Out-scaling water saving innovations to reduce water insecurity conditions of poor and marginalised communities in Vietnam's Upper Mekong Delta

Abstract

This project proposes to introduce and trial an innovative agricultural water saving technique in several ethnic Khmer villages located in the upper Mekong Delta of Vietnam, as a way to reduce seasonal water insecurity problems, address climate change concerns and improve livelihoods for these relatively marginalised communities. The project will be implemented over a period of 18 months and will have a primary focus on extending use of the promising alternate wetting and drying technique (AWD), which has been shown elsewhere in Asia to reduce water demand by 15 - 30 %. It has been demonstrated to be an effective method of reducing water consumption, decreasing methane emissions and improving overall profitability of rice cultivation in earlier trials conducted in Vietnam, including in An Giang province a few years ago. It is considered both a "water smart" and "climate smart" technique by the International Rice Research Institute (IRRI), the International Panel on Climate Change (IPPC) and other research agencies. However, many of the trials have been conducted under field crop experimental station conditions, with relatively few trialled on-farm under a variety of agro-ecological conditions. The project intends to correct this lacuna and trial the technique using participatory approaches with 80 households in four communities of Tinh Bien district, which has a high proportion of marginalised Khmer ethnicity villages. The agronomic and economic results will be tested against a control group, building confidence that the recommended technology is effective and suitable for wider extension, through government agency channels, principally under the auspices of the Department of Agriculture and Rural Development (DARD), selected as the boundary partner. Through rigorous testing locally, it is envisaged that the multi-disciplinary and inclusive approach and lessons learned will help inform relevant provincial and national policy related to climate change, agricultural water management and water (in)security for the Mekong Delta provinces, and possibly other provinces in Vietnam. Policy engagement is a key goal of the project.

The project expects that extending the AWD technique will be an effective entry point to understanding wider water security concerns for the target communities, including domestic and agricultural uses, that will ultimately directly benefit the households and communities involved. Inclusive involvement of different sub-groups in the pilot villages and the lessons learned from the project could act as a replicable model to follow for DARD and other state (or NGO) agencies involved in agricultural water resources management in similar communities in the Mekong Delta. Its innovation will not only be the water-saving techniques trialed, but also the participatory approaches taken to considering gender, ethnicity, poverty and social equity within the process of analysing water security issues, opening new space for outscaling and upscaling. It is believed that the joint action project can positively influence practical techniques and attitudes towards water insecurity reduction in the Delta region.

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02 Groundwater Infrastructure Sustainability Assessment (GISA)

Assessment of groundwater sustainability in the special economic zone of Thailand for operational groundwater management

Abstract

Groundwater, which plays crucial role in water security has been stressed due to unprecedented population growth, rapid urbanization, changes in lifestyle, land use and climate change. Meanwhile, government's initiatives like Special Economic Zones (SEZs) in Thailand, not only foster the country's economic growth but also limit equal access to water and create sectoral conflicts. Furthermore, the transboundary nature of groundwater, its partial knowledge and absence of proper bi-lateral frameworks, plans, and governance mechanism has emerged an immediate threat to water supplies, and competition over limited resources heightening the tension between neighbouring countries. Thus, the imbalance use and ineffective management of groundwater for development in SEZs is likely to bring sectoral scuffles and conflicts with vulnerable population such as poor, subsistence, marginalized and ethnic people. So, the proposed joint action project aims to apply the Groundwater Sustainability Infrastructure Index (GSII) developed under "Enhancing the Groundwater Management Capacity in Asian Cities through the Development and Application of Groundwater Sustainability Index in the Context of Global Change" (APN- 2013-2015). The GSII provides an assessment of the groundwater sustainability infrastructures (economics, social, institutional, environmental and mutual social trust) identify gaps of current groundwater governance and policies in SEZs and transboundary aquifers.

The proposed joint-action project with the Department of Groundwater Resources, Thailand selects Tak Province for assessing the groundwater sustainability in SEZs with the application of the proven GSII. This project is likely to be an ideal in identifying and replicating suitable guidelines and policies in other emerging SEZs under multiple stresses and social dimensions. The joint action project, which will run for two years with an integrated assessment approach to address the above research questions. It consists of system analysis to understand the context of groundwater and its use, the interdependences and complexities of the socio-physical system. Participatory and multi-stakeholder consultation/analysis and frame analysis will be used to capture values, interests, preferences, conflicts and interactions of actors regarding groundwater use and management. Similarly, a qualitative methodology such as review of related literature; interviews of relevant stakeholders (included media, NGOs, CBOs) will be used to analyse the current state of groundwater governance. The application of GSII in the SEZ gives a clear idea of current groundwater sustainability with gaps and way forward to fulfil those gaps.

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03 SERUWA

Evaluating social and environmental impacts of intensive rice production and pesticide use on water quality in the Lower Mekong Region: Case Studies of An Giang, Vietnam and Chiang Rai, Thailand

Abstract

Agriculture forms the backbone of economies, and it is also the cornerstone of human survival. This is especially true in the Lower Mekong region, where most of the riparian population relies on rice and fish production for food security and livelihoods. Global population boom and the agricultural transition toward exporting prompt farmers to maximize their yields through agricultural intensification and mechanization. On the one hand, intensive agriculture increases agricultural production, but on the other hand, this process leads to increased application of agrochemicals (herbicide, pesticides, and fertilizers), eventually causing severe ecological and human insecurity such as soil, sediments, water pollution, and human health. Vietnam and Thailand are the two leading producers of rice worldwide, where Northern Thailand and the Vietnamese Mekong Delta are the most significant agricultural production areas, making it the two "rice bowls" in the Lower Mekong region. It is perceived that the compounding impacts of the upstream development dynamics, climate change and the intensive rice production have exposed these agricultural areas to severe environmental degradation and declining surface and groundwater which are expected to become worse in the future under the complex contexts of land-use change, deforestation, and population growth.

Therefore, a better understanding of impacts of intensified use of agrochemicals on water resources, farming activities, and households' livelihoods, as well as ecosystems, is particularly important for future policy engagement for the long-term goal of regional sustainable development. The overall objective of the project is to create a policy impact by investigating the transportation of agrochemicals from paddy fields into the soil, sediments and the water environment with full participation and engagement of our boundary partners. We also plan to evaluate the social impacts of agricultural pollution, better understand the local perceptions and behaviours, and develop a policy pathway toward better agrochemical management. This research will form a basis to identify policy options and contribute to the on-going policy debate regarding the possible banning of toxic herbicide that would help address water insecurity and improve community health and resilience in the region. It is intended to be a pilot demonstration project with policy implications that can be potentially up-scale and out-scale to other places.

A transdisciplinary and participatory approach that engage geosciences (hydrology, geography, hydrogeology), ecological sciences, policy science and environmental sociology as well as boundary partners (i.e. policymakers and local communities) will be employed in this study in order to assess the spatial-temporal distribution of agrochemical pollution and its impacts on the environment (soil, sediments, water resources and ecosystem) and local livelihoods in hope to provide policy responses to ensure local and regional water security and environment protection. The research will consider to some degree levels of conflict, gender, social equity and human rights issues related to the accessibility of local people to water resources in the study areas. Partners at regional, national, and local levels will be engaged and consulted.

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04 PFRM-Ban Phai

Participatory flood risk management and policy implications: Ban Phai municipality in Thailand

Abstract

Northeast Thailand has been recently facing 'shock' to flash flood disasters during September-October 2019 especially in northeast region areas of Khon Kaen province at Ban Phai municipality (BPM) and many districts of Ubol Rachathani province. In Ban Phai, in particular, there has been no such a 500 mm rainfall recorded ever while the very heavily intense precipitation occurred during weekend days of 31 August to 1 September 2019. More than a thousands of households were inundated overnight of 31st August and many family members could not be evacuated but staying at the rooftop till early morning (https://www.youtube.com/watch?v=Tqtn4IoLYos). In consultation with the Khon Kaen Department of Disaster Prevention and Mitigation (KK-DPM) and the Office Water Resources Region 4 (OWR 4) they expressed the need on development and operational model for community involvement on flood disaster risk management, this would help these two responsible agencies together with Ban Phai Municipality and Ban Phai District Government to better manage future water-related disaster risk events. Our team members then decided to select Ban Phai Municipality to be the place under study on 'participatory flood risk management' (PFRM) while we expect the finding by this project will be a good show-case study that could be able to up scaled and replicate practice across NE Thailand cities.

We have reviewed and found that there still have never been introducing such this type of water-related disaster reduction practice model in NE Thailand. It focuses on strengthening the role of community actions on self-help and mutual-help among civil groups and active citizens. We have explored a number of guides and manuals on participatory action models working for flood risk management practice. We then wish to test this type of actions whether it will be working or fulfilling the missing flood mitigation gap in urban setting. We are planning to work with our boundary partners OWR 4, KK-DPM, Ban Phai District Office, Ban Phai Municipality, and local stakeholders. We also observed that during the recent heavy flood in Ban Phai many women, elderly, young children groups, low-income family, migrant workers, and many temporary houses, all these have been affected badly. We will organize a series of stakeholder engagement and shared learning activities (SELA) by; (i) organizing fieldwork participated by local stakeholders in exploring of insight information of flood impacted communities on their risk, vulnerability, and capacity management to flood hazard, (ii) holding a series of workshops in inventing and using simplified flood risk map and appropriate early warning methods and application for used by the communities, (iii) producing infographic and policy brief on raising awareness and concern on PFRM, (iv) organizing a press conference to deliver and disseminate project finding, and (v) holding the policy seminar on PFRM and urban flood mitigation policy and practice. We expect that our project will take at least 20 months to finish while working in the field we also hope to test the implementation model on the real situation of monsoon flood in 2020.

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05 **SEED-Up**

Reaching more farmers to better cope with climate change: A practical approach to scaling up flood-tolerant seed variety in Lao PDR

Abstract

Building up from previous research results on rice seeds that better fit submergence conditions in flood-prone areas in Lao PDR, the project intends to expand the planting areas for those varieties and expect to make changes in the knowledge, skill, and practice of local stakeholders such as farmers, private sector, extension officers, policy maker and practitioners. We use a co-design approach in which multiple stakeholders work together to conceptually develop research ideas and activities, actually carry out research, and generate and apply findings. We will also work closely with primary producers, actors, agronomists, economists, supply chain experts, local and central authorities.

The project will implement practical approaches to upscale the application of flood-tolerant seed variety in Laos in a 3-stage process: 1) A comprehensive impact assessment to evaluate the current stage of application for TDK1-Sub1 line in planted regions (4 districts of Khammouane province); 2) Scaling up process to upscale those rice varieties to other pilot areas with appropriate conditions of Savanakhet province; 3) Evaluation and policy implications.

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06 Flood Cam

Strengthening flood risk management induced by climate change in Stung Sen River Basin, Cambodia

Abstract

The proposed research project will firstly assess the physical and hydrological conditions, flood frequencies and future trends in rainfall patterns within the river basin and assess how these might influence future flood risks in the river basin induced by climate change. Secondly, it will identify the impacts of floods on local community livelihoods (both men and women) and social institutions. Thirdly, it will assess the institutional mechanisms and gaps in institutional capacity to strengthen flood risk management in the Stung Sen River Basin.

This research project will be integrated with the implementation of actions identified in the Cambodia Climate Change Strategic Plan (CCCSP) 2014-2023 and its strategic objectives particularly to promote climate resilience through improving water security, enhancing climate resilience of critical ecosystem and biodiversity, and improving capacities, knowledge and awareness at national and subnational levels for climate change. The research outputs will be used to develop a flood management policy brief to inform decision makers and practitioners.

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COVID-19 Emerging Research Project

01
Voices

01 VOICES

Listening to voices on the margins: Lessons from the COVID-19 crisis for improving access to clean water for drinking and hygiene in the Mekong Region

Abstract

Limited access to clean water for drinking and personal hygiene (e.g. handwashing) puts people at greater risk of contracting and dying from COVID-19. As of mid-June 2020, the direct effects of the COVID-19 outbreak on human health in the 5 Mekong Region countries have been comparatively modest compared to many other regions of the world. What will happen in the latter half of 2020 and further into the future is difficult to forecast, and risks for people without good water access remains a concern.

The indirect effects of restrictions on the movement and activities of people within and across borders, necessary to reduce the likelihood of infections spreading more widely, have already had significant impacts on employment, livelihoods and incomes. Although some concerns were expressed early on for at risk groups in Myanmar, it is unclear what impact that the disruptions to systems of provision, reduced income and restricted mobility as a result of responses to the COVID-19 outbreak had on vulnerable and marginalized people's access to clean water for drinking and hygiene.

In the first couple of months of 2020, concurrent with the COVID-19 outbreak, some parts of the Mekong Region were also suffering from drought. It is unclear if the COVID-19 outbreak exacerbated in any way the water insecurities arising from climate and resource conditions at the end of dry season in 2020, or if the impacts on wellbeing and insecurities were largely independent from each other. As the wet season of 2020 unfolds the question may also arise regarding flooding as this can, through contamination, effect access to clean water.

The COVID-19 outbreak has been a disruptive crisis, in the sense of its impacts on systems of provision. What lessons can we learn from the COVID-19 crisis for reducing water insecurities in the Mekong Region, in the event of other disruptive crises, for instance disruption of clean water supplies or source arising from climate-related disasters?

The disruptive COVID-19 outbreak is a critical opportunity to help improve access to clean drinking water and hygiene for all. In this project, we listen to some of the most vulnerable and marginalized people in the Mekong Region to find more effective ways of meeting their needs and reducing their risks.

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Rapid Response Research Projects

01
Co-creating Knowledge to Enhance Women's Leadership in the Mekong Region

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Co-creating Knowledge to Enhance Women's Leadership for Inclusive River Governance and Livelihood Resilience in the Mekong Region

Abstract

Women's vulnerability has drastically increased as a consequence of Covid-19, further increasing the burdens they shoulder as well as threatening the food security and livelihoods of communities who rely on local waterways for survival. The Co-creating Knowledge to Enhance Women's Leadership for Inclusive River Governance and Livelihood Resilience in the Mekong Region Project works to accelerate progress towards women's leadership in river governance and enhance women's livelihood resilience in the Mekong region by identifying and implementing the most effective mechanisms for knowledge co-creation. The research develops a co-creation of knowledge framework based on existing literature and interviews across the region, and subsequently tests and implements this framework in communities in Thailand and Myanmar, emphasising women's engagement and leadership. Women, and men, in the communities then work to develop a locally-appropriate curriculum, identify research questions and hypotheses, and implement a monitoring program-cum-research methodology to answer those questions with the support of the project team, and to develop a shared vision related to future livelihoods with other local stakeholders. A series of communication outputs coming out of the project will be designed for multiple audiences in order to enhance project scalability and adaptation for other regional contexts. Knowledge is power, and the incorporation of women's knowledge into river management is essential for improved water governance to support, sustain and eventually enhance local livelihoods throughout the region. The current pandemic only further highlights the urgency of doing so.

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