



The 2nd State of the Mekong Address

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- ***Members of the MRC Joint Committee, Secretariat***
- ***Ambassadors and Representatives of Partners, and broader stakeholders***
- ***My fellow Mekong citizens,***

In two days, it is Mekong Day. On that day, last year, I gave the inaugural State of the Mekong Address. The idea was to tell it like it is – what’s happening in the Mekong; and what’s being done about it, given the mandate and role of the MRC. I said this carefully, given the mandate and role of the MRC, as we cannot do everything. The hope is to inspire you, in your respective roles and interests, to complement our efforts, fill our gaps, and do what we cannot.

I said at the time that it was time to celebrate the birth of the Mekong River Commission, 27 years since 1995. But it was also time to reflect deeply and be aware of the unprecedented challenges the Mekong – the largest river in Southeast Asia, a great river of the world – was facing.

Four straight years of low-flow and drought had brought hardships for millions of vulnerable fishing and farming families. And do you remember that little virus COVID 19? One year later, we may now forget how to wear a mask properly, or operate a zoom or webex call. But what cannot be forgotten is the untold suffering COVID brought to all of us and exacerbated the environmental stress.

Do I have good news this year? The answer is yes and no. Everyone wants good news last, so let me begin with the alarming news.

At the MRC, we continue to track the state of the Mekong through our monitoring and reporting system, which provides the status and trend of key indicators in environmental, social, economic, climate change and cooperation dimensions.

Let’s start with the environment. In the year 2022, drought may have subsided, and we may have more rain, but the Environment still faces several pressing challenges. Five are key: the changing flow regime, sediment, salinity intrusion, plastic pollution, and climate change.

First, the flow regime. Back when the 1995 Mekong Agreement was signed, the annual flow was far different: Compared to the long-term average, over the past 10 years or so, our monitoring has recorded higher dry-season flows, but lower flood-season flows. This brings positive and adverse impacts.

The greatest concern is at the Tonle Sap – Southeast Asia’s biggest and most productive lake – the “beating heart” of the Mekong. During the dry season, the lake flows into the Mekong, and during the wet season, it reverses its flow and amazingly “travels back up”, expanding the Lake up to five times!

But as the flood season flows have reduced, the amount of reverse flow into the Tonle Sap has declined noticeably. Reverse flow is important, because it produces and maintains biodiversity and fish catch. At the MRC we have a procedure to monitor this reverse flow. And things are not looking good. In 2006, for example, the average number of violations per year was only 7. Yet in 2022, it breached more than 100 days per year. With the reverse flows reduced, the outflows also reduced. In December last year, the average outflow into the Mekong was only half of what was in 1995. I repeat, only half.

Second, sediment. On the mainstream it continues to decline, largely as a consequence of sediment trapping and a lot of sand mining. The only exception is at Chiangsaen, the top of the lower Mekong, where sediments had already declined considerably prior to 2009, and appears to have stabilized somewhat. Further down, however, at Luang Prabang since 2011, and Mukdahan since 2009, average daily sediment loads have reduced by more than 90 per cent; at Phnom Penh, it is by 60% and then finally at Tan Chau, by half.

The reduction of sediment affects floodplain productivity as well as riverbank stability, among other things. The Mekong cannot continue to lose sediment, otherwise it will cease to be the Mekong.

Third, saltwater intrusion into the Delta. Over the past 30 years, during the dry season, an average of 12,000 square km of the Delta has been affected by salinity concentrations above 1 gram/Litre. What’s even more worrying is that, during this period, the areas affected by concentrations above 4 gram/Litre increased by an average of 138 square km per year. Now, at 1 g/L, there are some consequences on general irrigation, but from 2 g/l and above, let alone 4 g/l, there can be severe consequences for paddy irrigation – with implications for food security and export.

Fourth, plastic pollution. The Mekong River is estimated to contribute the 10th-largest amount of plastic debris into the world’s oceans – up to a hundred tonnes per day. That’s like the size of a giant whale of waste thrown into the ocean each day! Within the Mekong itself, macro-plastic waste typically accumulates at ports and piers, with an average accumulation of 21 kg/day. And this is only the debris we can see. Our monitoring detected micro-plastics in water (at 1–2 particles/L) and even 20% of the sampled fish. Riverine plastic pollution can harm aquatic life in multiple ways, from entanglement to ingestion of toxic substances. And with micro-plastics in fish, our food chain becomes contaminated.

Fifth, climate change and the consequences for floods and droughts. On flood, the frequency of typhoon formation in the Pacific Ocean has decreased over the past 30 years, corresponding to a reduction of the number of heavy rainy days in the lower Mekong. The flooded areas in the basin have also not increased over the last 20 years. Meanwhile, drought

frequency has increased in the last ten years (from 2010 to 2020), compared to the ten years before (i.e. from 2000 to 2009).

While there is a trend of reducing flood frequency and increasing drought frequency, make no mistake, there were still significant floodings in the basin – with an average of 2 million people affected per year over the past 6 years. Even in extremely dry years, say from 2019-2021, at least 150,000 were affected. And in the wet years, in 2018 and 2000, the number of people suffering from floods increased to as many as 12 million.

In sum: Flow regime, sediment, salinity, plastic, flood and drought. While those five areas are of great concern, I have mixed news for water quality, ecological health and fish; and better news with our social and economic indicators.

For Aquatic Life and Human Health, Water quality along the mainstream remains ‘Good’ or ‘Excellent’ for most sites, although water temperatures have increased at more than 1.5 degrees Celsius since 2010. While there are signs of ecological stress, the ecological health of the river has generally been rated as ‘Excellent’ or ‘Good’, with no more stations rated as ‘Poor’ by 2021.

Turning to fish, one of our most important resources – our latest 2022 assessment appears to suggest that, in general, a similar amount of fish are being caught, with an Annual yield of nearly 1.7 million tonnes and other aquatic animals around 443,000 tonnes. The economic value of these capture fisheries and aquatic animals is as high as US\$ 9.1 billion per year. (billion per year. That’s a lot of money. Nevertheless, the fish being caught are smaller in size and shorter in life than expected, and the greatest stress is in the zones of the Mekong downstream of Nam Beng to Vientiane, and from Nam Kam to Stung Treng.

Regarding the social dimension, the good news is that overall living conditions and well-being are improving across the basin. In Cambodia, for example, household income doubled from 2013 to 2020, poverty level halved, and access to water resources has increased to similar level in Thailand and Viet Nam. Cambodia also has 80% access to electricity, while Laos, Thailand and Viet Nam have almost 100%.

In addition to fish, the Mekong continues to be significant for the economies of the basin countries. The quantity of rice produced has grown strongly over the last 20 years, with the latest figure, in 2020, of over 51 million tonnes, half of which was produced in Vietnam and around a third in Thailand. There is also a major growth in aquaculture production, especially in the Delta where the volume produced has increased from 1.8 million tons in 2015 to 2.4 million tons in 2020. Cambodia, traditionally relying on captured fisheries, has quadrupled its aquaculture production in 2020. In sum, the Mekong water and related resources contribute 188 billion dollars to the Mekong economy (2019 figure), up from 139 billion dollars in 2015 – a 35% increase.

Now that I’ve painted for you a broader picture of the Basin, let me describe what we have been doing in supporting countries to address the environmental crises, as well as to realize more opportunities for growth.

Over the last year, each of our work focuses on strengthening the two key roles of the MRC: “knowledge hub” – the innovation and modernization we are bringing- and “water diplomacy platform”.

Under the knowledge hub, we have enhanced the communication and use of our services such as **flood and drought forecasting information**. In line with the digital age, we are also exploring big data and Artificial Intelligence. [And no, my speech has not been drafted by Chat-GPT. Not yet, anyway.]. And from the current one week forecast, we have now developed capability to undertake medium to long term forecast – one month, three months, 6 months. To be roled out later this year, this information will be critical for our countries to plan better in terms of prevention and response.

Last November, we approved our redesigned Core River Monitoring Network. This core network takes what was once individual river-monitoring systems – hydrology, sediment, ecological health, water quality and fisheries - and now collects data in a more integrated way. It also incorporates the monitoring method and stations of the Joint Environmental Monitoring of mainstream dams Xayaburi and Don Sahong. The network puts us on track to be able to capture timely changes on the mainstream, due to climate and water infrastructure operation. In the long run, we need more cost effective river monitoring technology. This is why we have turned to our best and brightest university students to come up with homegrown tech. In a way, this is also to inspire the youth to monitor the Mekong and take actions if they see problems.

Much more than monitoring, we continue to take action to address the pressure on fisheries. We have finally secured approval, after 5 years, to role out the new Preliminary Design Guidance on Mainstream Dams, including updated knowledge, standards and latest best practices on fish passes. We also supported the Countries to apply two new Fishway Guidelines for the thousands of irrigation schemes, to remove some of the barriers or build new fish passes. And more than mitigation, we will bring additional financial resources to benefit directly the people. Here, we have worked with our partners on a transformative transboundary fisheries management project – aiming to improve value chains, reconnect swim ways, and offer viable livelihood alternatives. Finally, we hope to soon launch the trial implementation of the Mekong Fund, targeting the improvement of livelihoods and biodiversity for critical wetlands, watershed and environmental hotspot.

As the Mekong is a large and complex system, with many parts, players and perceptions, within the basin and without, a shared understanding on the most critical issues is absolutely necessary for cooperative action to take place. Thus, an important part of being a knowledge hub for the MRC is also to have this knowledge shared with a key actor upstream – and that is why, we are pleased to almost complete the first phase of the Joint Study on the *Changing Patterns of Hydrological Conditions of the Lancang-Mekong River Basin* with the LMC and China. After many sessions - technical, modeling, exchange of visits, informal talks - we are on our way to a common understanding on the situation, and more importantly, the recommendations on how to adapt to the changing flow regime.

This work is also related to two other major work, which are the strategic shifts for Mekong cooperation. First the work on **cooperative mechanisms** for data sharing and notification for

Mekong dams and reservoirs. Second, we have embarked on a **proactive regional planning**. This is not a traditional planning exercise. It is rather a management intervention to address the most critical basin issues and needs (sediment reduction, environmental limits, storage options, water-energy mix) and at the same time upgrade our Decision Support System to have operational capacity. We will deliver the initial upgraded Decision Support System by end of the year, and the new planning information next year to make major new decisions on joint investment projects and operational measures.

In terms of water diplomacy, we are actively facilitating dialogue and discussion on the **consultation process** for the proposed Sanakham HPP, and Phou Ngoy HPP. While there are differences of views by some countries, they have remained in dialogue, and the MRC remains impartial and objective in facilitating a meaningful process, embedded in the existing Procedures and practice, and providing additional technical assessment and support, in order to address the legitimate concerns of all parties.

And after 18 years of debate, the first ever Transboundary EIA guideline in the Mekong has been agreed for voluntary application. Laos has launched the guideline for the Sekong A hydropower project, which is historic as the project is on the tributary, and we have no doubt that a lot of lessons will be learned, transparency gained, capacity built, cooperation and trust enhanced between Laos, Cambodia, and Vietnam, and a better development will be in place for the future. Make no mistake, the first TbEIA process will be trial and error. It will not be perfect. But under my leadership, the MRC is not and will not be in the business of pointing fingers. We will as I said, ensure dialogue, build understanding and capacity, share data and info, and adapt.

And between Cambodia and Thailand, with our partners, we have for some time supported joint assessment, capacity building, installation of river monitoring and early warning system, and a master plan for managing flood and drought in their shared sub-basin, including incorporating nature-based solutions.

Another area where our diplomacy works is facilitating common rules and regulations for navigation of the common river border, almost a thousand kilometers, between Laos and Thailand. You may be surprised but each country has its own rules for vessels and their use of the river, which in parts has rocky outcrops, narrow channels and strong currents during the rainy season. After much work, we have concluded common rules for the two countries to use. And this will facilitate safe travel, trade, and economic growth.

Now, while we fully believe in the work we do, and that they matter, they are only a fraction of what needs to be done in the Mekong, given the scale of the challenges and the opportunities to be captured. The MRC is indispensable, but it does have its limits. Rather than having a big mouth to point to always point to our failures (well, sometimes it is ok), have a big heart to understand our role, and support us in filling the gaps, and again, do where we could not.

At the recent UN Water Conference, leaders from around the world made various commitments for water action. Here in the Mekong, we don't just want action, but action that makes a difference.

None of our broader challenges will be easy to overcome. Nor has different overarching national interests of the riparian Countries disappeared. This may spark occasional tensions among us, while external forces have their own interests. Given our region's history and strategic location, it seems we remain a forever hotspot for competition, intervention and powerplays.

We live in peaceful times in this region, thanks to the cooperative spirit and institutions such as the UN, ASEAN and MRC, that lay down the rules of engagement, foster dialogue and build trust.

Yet we also live in dangerous times, with tectonic shift in the global geopolitical landscape that have implications for Southeast Asia. Last year at the State of Mekong Address, I said our environmental crisis demands a sense of urgency. Our feet should be on fire. Today I say, however, we should not add fuel to fire. We call on the riparian countries, partners and stakeholders to act. But the way we choose to act, and the way our friends within the region and without, act, will determine the fate of the Mekong and all of us.

I have full confidence that when our leaders meet at their 4th Summit in two days, they will send a message of unity. They will prioritize the key issues – the changing flow regime, sediment, fish, plastic, climate change - that need to be addressed.

They will point out that cooperation not conflict, dialogue not division, will prevail, as they have been for three decades since the MRC was established.

Please join us in this Mekong spirit of cooperation; innovate and act to make a difference.

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