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WAPPP MAGAZINE

THE GREEN FINANCE ISSUE

MAIN FEATURE: Green Finance: Building Resilient PPPs

SPECIAL FEATURES:

- Paving the Way for Sustainable PPPs in Africa
- Advancing SDG 17.17.1: Unlocking the Potential of Public-Private Partnerships
- Advancing Sustainable Development Through Public-Private Partnerships

CHAPTER FOCUS:

- Ports
- Philanthrophy

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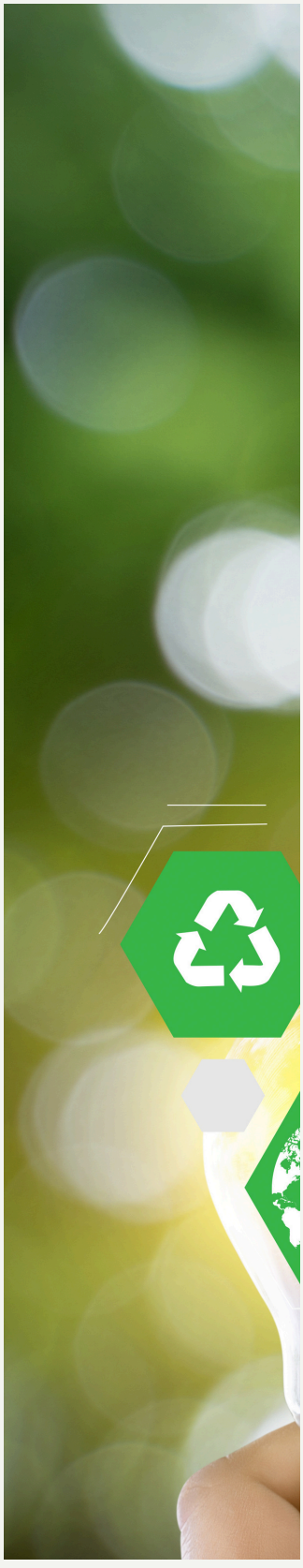
Contributors

Some of the collaborators on our latest issue



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Thank you to our corporate members for joining the WAPPP community. We're thrilled to have you on board!

Editor's Letter

Embracing Green Finance: Insights, Leadership Changes, and a Renewed Vision for the Future

Welcome to the latest issue of the WAPPP Quarterly Magazine! In this issue, we focus on green finance with several thought-provoking articles that shed new light on the challenges and opportunities ahead. We also include our annual report and a variety of discussions which we hope will be both entertaining and inspiring.

This issue arrives on the back of WAPPP's 2024 General Assembly, held on June 25th both in Geneva (at the Palais des Nations) and online. The meeting was a significant opportunity for WAPPP, providing us the opportunity to take stock of the impressive progress we have made as an organization, the enthusiasm and commitment of our team of volunteers, and the exciting projects on the horizon.

During the General Assembly, we also renewed the composition of our Executive Committee. With the statutes allowing for two consecutive 3-year terms, it was important to ensure a smooth leadership transition.

"In this issue, we focus on green finance with several thought-provoking articles that shed new light on the challenges and opportunities ahead."

We are pleased to announce that Ziad-Alexandre Hayek and Jean-Christophe Barth have been re-elected for their final term and will continue their exceptional leadership as President and Executive Director. Their guidance has been instrumental in WAPPP's growth and impact.

In the spirit of renewal, Co-Founder David Dodd, who has been a tremendous asset as Treasurer and one of the driving forces behind WAPPP, and I have decided to step down to make room for new leadership.

We are excited to welcome Jacques Follain and Sharifah S. Hamzah to the Executive Committee, both of whom have demonstrated remarkable dedication to WAPPP's mission. Additionally, Executive Committee members Jyoti Bisbey, Fatima Zohra Rahmoun, and Jinane Gosh were unanimously re-elected. Congratulations to all!

This General Assembly has provided a renewed impetus to our work program, setting the stage for ambitious projects in 2024 and 2025.

WAPPP continues to solidify its position as the leading non-governmental PPP organization at the global level, as evidenced by the growing recognition from major international institutions. Stay tuned for more on these exciting developments in upcoming issues of the Quarterly Magazine.

Of course, the broader international context presents its own challenges for PPPs. The ongoing conflicts in Ukraine and the Middle East add to global uncertainty and disrupt supply chains. Meanwhile, financial markets have been highly volatile, with a stock market crash narrowly averted in August. Public opinion remains divided on PPPs. Yet, these obstacles only strengthen our determination to promote PPPs as powerful solutions to the world's most pressing issues - whether it's combating climate change, advancing the Sustainable Development Goals, or addressing rising inequality.

We hope this issue brings valuable insights and inspiration as we continue to champion PPPs on the global stage.

Happy reading!

Thibaut Mourgues

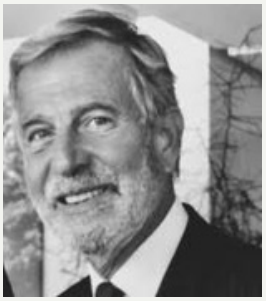
Head of Editorial Board

"This General Assembly has provided a renewed impetus to our work program, setting the stage for ambitious projects in 2024 and 2025."

ZIAD-ALEXANDRE HAYEK,
PRESIDENT

JEAN-CHRISTOPHE BARTH,
EXECUTIVE DIRECTOR

EXECUTIVE COMMITTEE MEMBERS



JACQUES FOLLAIN
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“Green finance is essential to tackle climate change and ensure sustainable development. We must mobilize financial resources to support this transition.”

-Ban Ki-moon

Former UN Secretary-General

WAPPP

Green Finance: Paving the Way for Sustainable PPPs in Africa

BY ABDUL-RAZAK FUDIA & KNOLLIS DELLE

As the continent addresses the dual challenges of rapid economic growth and environmental preservation, innovative financial mechanisms are emerging as key drivers of progress. This article examines the role of green finance in driving sustainable development through public-private partnerships (PPPs) in Africa through the viewpoint of exemplary case studies and thought leadership.

Over the past three centuries, human activity has resulted in an increased reliance on natural resources, significant environmental degradation and an elevated risk of climate change. Despite warnings from environmentalists and global commitments to preserve the environment, data shows that environmental challenges are getting worse. This is indicated in a 2023 report from the London School of Economics which states that 420 million hectares of forests were lost between 1990 and 2020, releasing more carbon into the atmosphere and making climate change worse.

Governments and countries can help curb this issue by adopting green and sustainable measures, which can reduce energy poverty and the consumption of natural resources. Green growth is the process of nurturing economic expansion while simultaneously protecting the environment. It is challenging for countries seeking to achieve sustainable growth to secure sufficient funding to support green projects. A significant number of countries are currently experiencing capital constraints, and regrettably, green projects often fail to feature prominently on government agendas.

The term ‘green finance’ is used to describe financial investments that are directed towards sustainable development projects and initiatives, with the objective of promoting the growth of a sustainable economy. One of the main ways in which green finance encourages sustainable growth is by encouraging private sector involvement in sustainable projects.

In Africa, PPPs have constituted a pivotal mechanism for infrastructure development, yet they are often confronted with a multitude of challenges, including financial constraints and environmental concerns. Green finance PPPs in Africa offer an alternative to traditional financing for addressing pressing development challenges while preserving environmental sustainability.

Role of PPPs in Scaling Green Finance

In 2008, The World Bank issued its inaugural Green Bond with the objective of financing projects that would mitigate climate change and promote environmental sustainability. The proceeds were allocated to support renewable energy projects, energy efficiency improvements and sustainable transportation systems. The effectiveness of PPPs in delivering large-scale infrastructure when combined with green finance principles in PPPs can become powerful vehicles for sustainable development. Notable green finance projects in Africa demonstrate the potential of this approach.

1. **Masdar,** a renewable energy company based in the UAE, successfully raised $1 billion through its second green bond issuance. The proceeds will be used to fund a range of renewable energy projects with a combined nominal capacity of 3.7 GW, which are expected to reduce greenhouse gas emissions by 5.4 million tonnes annually upon full operation.
2. **The Nachtigal 420 MW Hydropower Project** is being developed through a public-private partnership (PPP) between the Government of Cameroon, EDF, and the International Finance Corporation (IFC). The project's financing package comprises green bonds and sustainability-linked loans. This project demonstrates the potential of green finance to support large-scale renewable energy projects in Africa.
3. **The Lake Turkana Wind Power Project** was financed through a complex structure involving development finance institutions, commercial lenders, and equity investors. It attracted international investors through carbon credits and green bonds, while the PPP structure ensured government support and risk mitigation. The project's financial structure included a partial risk guarantee from the African Development Bank.

1 **On the sidelines of COP28 in Dubai, independent power producer (IPP) Abu Dhabi Future Energy Company (Masdar) signed agreements with at least six African countries to develop 10 GW of installed renewable energy capacity by 2030.**

2 **The Nachtigal 420 MW Hydropower Project will increase Cameroon's electricity generation by 30% once fully operational**

3 **The Lake Turkana Wind Project (LTWP) can generate up to 310 MW from 365 turbines spread over 40,000 acres near the southern tip of Lake Turkana.**

Opportunities and Challenges in the African Context

The African continent is home to some of the world's fastest-growing economies, with a young and increasingly urbanized population driving demand for infrastructure, energy, and services. However, this growth comes with significant environmental challenges, including deforestation, biodiversity loss, and vulnerability to climate change impacts.

The African Development Bank estimates that the continent requires $100-$170 billion annually in infrastructure investment to meet its development goals. Traditional funding sources have proven insufficient to bridge this gap, necessitating innovative approaches that align economic growth with environmental sustainability.

Notwithstanding the considerable potential for green finance PPPs in Africa, there are several emerging challenges that need to be addressed.

"Green finance encourages private sector involvement in sustainable projects, making it a pivotal mechanism for infrastructure development in Africa."

As green finance gains prominence, there is a risk of 'greenwashing' – projects being labelled as green without delivering genuine environmental benefits. In resource-constrained environments such as African economies, there are tensions between immediate development needs and longer-term sustainability goals. Many African countries face limitations in technical capacity and institutional frameworks for managing complex green finance PPPs.

Charting the Green Future Path

As green finance and PPPs continue to evolve in the African context, several key considerations emerge for policymakers, investors, and development practitioners.

- To scale green finance PPPs across Africa, there is a critical need for capacity building at both the public and private sector levels. This includes developing expertise in structuring green finance instruments, assessing environmental impacts, and managing complex PPP arrangements.

- Standardization of green finance criteria and PPP frameworks can help reduce transaction costs and attract more investors. Stringent standards and third-party verification are essential to maintain credibility and avoid greenwashing in these criteria and frameworks.

- The combination of concessionary finance from development institutions with commercial capital can assist in reducing the risk profile of green projects, stimulating private investment. Innovative blended finance structures, such as first-loss guarantees or tiered capital structures, can facilitate the bridging of the risk-return gap for private investors in green PPPs. Thus, by providing guarantees or co-financing, governments can reduce risks for private investors and encourage PPPs to pursue green projects.

The African Development Bank estimates that the continent requires $100-$170 billion annually in infrastructure investment to meet its development goals

- Embracing technological innovations can enhance the effectiveness of green finance PPPs. For example, blockchain technology can improve transparency and traceability in green bond issuances, while artificial intelligence and big data analytics can enhance environmental impact assessments and project monitoring

- It is essential that governments establish favourable conditions for green finance PPPs to flourish. This entails developing transparent green taxonomies, implementing carbon pricing mechanisms and offering fiscal incentives for sustainable investments.

- Governments can launch campaigns to raise awareness about the benefits of green finance and sustainable investments, which can help build a culture of sustainability and encourage both public and private sector participation. There is a need for training and capacity building for financial institutions, government agencies, and other stakeholders to enhance their ability to develop and manage green finance projects.

Green finance is a powerful tool for financing the transition to a more sustainable economy in Africa. Integrating green finance into PPPs will enable African countries to address their infrastructure needs while catering and contributing significantly to global climate goals.

Did you know that **WAPPP** in collaboration with **InfraPPP by Aninver** produces the quarterly **Deal Update Report?** The report highlights how both economic volatility and geopolitical dynamics have shaped key PPP transactions and trends over the past quarter.

READ/ DOWNLOAD IT HERE:

"We must put green finance at the heart of our economic recovery, ensuring that our investments not only drive growth but also protect our planet."

-Alok Sharma
COP26 President

WAPPP

Advancing SDG 17.17.1: Unlocking the Potential of Public-Private Partnerships

Despite the importance of PPPs in achieving the Sustainable Development Goals (SDGs), the indicator measuring these partnerships, SDG 17.17.1, remains underdeveloped. This article explores the historical context, current challenges, and unique opportunities for WAPPP to lead the way in redefining and enhancing the role of PPPs in sustainable development.

BY PROF. RAYMOND SANER

Since the launch of the 2030 Agenda for Sustainable Development in 2015, the United Nations Interagency and Expert Group on SDGs (IAEG-SDGs) has played a crucial role in developing and refining the indicators used to measure progress toward the Sustainable Development Goals (SDGs). One of the most underdeveloped indicators is SDG 17.17.1, which pertains to Public-Private Partnerships (PPPs). Despite its significance, this indicator has faced numerous challenges in its classification and application, highlighting the need for greater attention and development. This article explores the history, current status, and potential opportunities for the World Association of PPP Units and Professionals (WAPPP) to address these gaps.

SDG 17.17.1: Background and Definition

SDG 17.17 aims to 'encourage and promote effective public, public-private, and civil society partnerships, building on the experience and resourcing strategies of partnerships'. The related indicator, 17.17.1, measures the 'amount in United States dollars committed to public-private partnerships for infrastructure'. Initially, this indicator was classified as a Tier III indicator, indicating that there was no internationally established methodology or standards, and data were not regularly produced. Over time, the indicator was reclassified to Tier II and finally achieved Tier I status in 2021, meaning that it now has an established methodology and standards, with data being regularly produced by countries).

However, the journey to Tier I status has been fraught with issues, particularly concerning the scope and inclusiveness of the indicator. The slow and questionable classification process has been documented in the WAPPP-CSEND publication 'Making PPPs Fit the 2030 Agenda', where the limitations and missed opportunities of SDG 17.17.1 are critically examined.

Challenges and Limitations of SDG 17.17.1

Despite its reclassification to Tier I, SDG 17.17.1 remains underdeveloped for several reasons:

1. Narrow Focus on Infrastructure: The elevation of 17.17.1 to Tier I status was partly achieved by narrowing its focus exclusively on infrastructure projects, thereby excluding other critical areas such as healthcare and education PPPs. This exclusion undermines the holistic approach needed to meet the 2030 Agenda's goals, particularly in sectors where public-private partnerships are vital.
2. **Exclusion of Civil Society Organisations (CSOs):** Although SDG 17.17's text encourages partnerships with civil society, The World Bank has excluded PPPs involving CSOs, cooperatives, mutuals, and community associations from the scope of 17.17.1. This exclusion is particularly concerning for small-scale PPPs (SS-PPPs) that rely on such partnerships to address local and community needs).
3. **Redefinition of PPPs:** The World Bank has unilaterally redefined PPPs as 'any contractual arrangement between a public entity or authority and a private entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility'. This redefinition contrasts with the 2030 Agenda's broader definition, which included civil society and philanthropic organisations, further narrowing the scope of SDG 17.17.1.
4. **Lack of Data on Non-Monetary Contributions:** The current measurement of 17.17.1 is based solely on monetary commitments, ignoring other forms of contributions such as land use, water rights, and other non-monetary resources that are crucial for the success of SS-PPPs.
5. **Absence of Quality Assessment Criteria:** The indicator does not provide any framework for assessing the quality of PPPs, focusing only on the amount spent. This accounting approach fails to capture the true impact and effectiveness of PPPs in achieving the SDGs .

"It's essential to move beyond monetary commitments and assess the true impact of PPPs in achieving sustainable development goals."

Opportunities for WAPPP

Given these challenges, WAPPP has a unique opportunity to fill the gaps left by The World Bank and enhance the effectiveness of SDG 17.17.1. The following initiatives could be pursued:

- **Data Collection from Small-scale PPPs:** WAPPP could collect data from SS-PPPs, including partnerships involving CSOs, cooperatives, and community associations, to provide a more comprehensive picture of PPPs globally.

- **Knowledge Platform on Health and Education PPPs:** Establishing a platform focused on health and education PPPs, sectors excluded by The World Bank, could provide valuable insights and guidance for stakeholders involved in these areas.

- **Inclusion of Large Partner Organisations:** WAPPP could gather data on PPPs that involve large partner organisations such as Multilateral Development Banks (MDBs), donors, and philanthropic organisations, recognising their significant role in post-conflict and disaster recovery efforts.

- **Defining Key Values for PPPs:** WAPPP could go beyond the current indicator's focus on monetary commitments and define key values for PPPs, such as Value for Money (ROI), Value for Society (SDG alignment), and Value for Future Generations (environmental sustainability).

- **Building Partnerships with International Organisations:** WAPPP could collaborate with international organisations like the European Investment Bank (EIB), UNCTAD, WHO, UNESCO, UNECE and OECD to develop and promote these key values, creating a more robust and comprehensive approach to PPPs.

- **Capacity Building for Developing Countries:** Using the data and insights gathered, WAPPP could create learning tools and conduct seminars aimed at building capacity in developing and least developed countries, helping them implement effective and sustainable PPPs.

At the #ConnectToChange conference, September, 2024 in Sursee, Switzerland, more than 60 foundations gathered for the first-ever fishbowl conversation about public-private-philanthropy partnerships – PPPPs. WAPPP was represented by Jean-Christophe Barth-Coullaré, Executive Director, and Max von Abendroth, Lead Public-Private-Philanthropy Collaboration, The Partnering Initiative (TPI) & Chair of the Philanthropy in PPPs Chapter.

Way Forward

SDG 17.17.1, despite its reclassification to Tier I, remains underdeveloped and limited in scope. However, these challenges present significant opportunities for WAPPP to take leadership in redefining and expanding the role of PPPs in achieving the 2030 Agenda. By addressing the gaps in data collection, WAPPP could contribute to the development of more effective and impactful PPPs, ensuring that the full potential of partnerships is realised in the pursuit of sustainable development.

"WAPPP has a unique opportunity to redefine and expand the role of PPPs in achieving the 2030 Agenda."

WAPPP hosts bi-weekly discussions on small-scale public-private partnerships (PPPs), focusing on practical solutions and innovative strategies to enhance their effectiveness in achieving Sustainable Development Goals. Attendees gain valuable insights and strategies to better implement and support these essential projects.

"We have to recognize that climate change is the biggest threat to development, and mobilizing green finance is critical to addressing this challenge."

-Jim Yong Kim

Former President of the World Bank

Green Financing: Building Resilient PPPs

BY GIULIA SANTOS SOUSA, JULIANA ROSSI & LUISA VIEIRA ROSADO PIMENTA

This article explores the integration of climate insurance and green finance into Public-Private Partnerships (PPPs) to increase climate resilience in urban infrastructure projects. It highlights the need for robust contractual modeling that incorporates climate risk mitigation and financial sustainability. This modeling, along with climate insurance, assists in increasing green financing by making projects safer for investors. Collaboration between public and private sectors is essential to address the challenges of climate change, promoting the development of sustainable infrastructures that are adaptable to new climate realities.

The ability to deal with the negative impacts of climate change varies significantly across countries, with developing countries facing greater challenges due to financial and infrastructure constraints. Global climate action requires substantial investments to mitigate and adapt to the adverse effects of climate change, requiring coordinated efforts and adequate funding. Recognizing this need, the United Nations Convention on Climate Change (UNFCCC) has established financial mechanisms and created new entities, such as the Green Climate Fund (GCF) and the Adaptation Fund, with the aim of mobilizing resources to support climate action in developing countries (UNFCCC, 2024).

Latin America is in a paradoxical situation in terms of development. Although most countries in the region are classified as middle-income or high-income, almost all have a Gini Index greater than 40, which places them among the most unequal in the world (Stanford Social, 2023).

This paradox allowed the development and implementation of several financial innovations aimed at social and environmental impact in the region. Such innovations have facilitated the mobilization of domestic and international resources, directing them to markets with different levels of structuring. These efforts are essential to ensure that all countries, regardless of their economic capacity, can adopt effective climate change mitigation and adaptation strategies.

Global climate action requires substantial investments to mitigate and adapt to the adverse effects of climate change, requiring coordinated efforts and adequate funding.

Despite recent efforts, there is a significant deficit of US$1.5 trillion to achieve climate resilience in the region, according to the United Nations (2023), which highlights the disparity between the urgent need for financing and the resources currently available.

The entire financial incentive, its regulation and structuring of financing to mitigate the impact of climate change in the face of the development of economic-financial and legal modeling of urban infrastructure, runs through important contractual markers.

For green finance to be increasingly incentivized and secure, it is crucial that projects are well-designed and that contract modeling is robust and comprehensive. This process should take climate change into account and incorporate appropriate climate insurance.

Well-structured projects that integrate elements of a more resilient urban infrastructure combined with climate security increase their attractiveness to funders by mitigating risks associated with extreme weather events and ensuring continuity of operations.

Thus, this article explores how to build these elements of climate security, highlighting the importance of detailed planning and risk mitigation strategies, so that a project becomes a reliable and attractive recipient for green investments.

Legal Modeling and its Artifacts as a guarantee of Sustainability in PPPs

Understanding the factual volatility inserted by climate change and the need for regulation between the availability of financing and insurance for the development of economic-financial and contractual modeling in urban infrastructure projects, we must first understand what public-private partnership is in its broad sense in Brazilian law.

Carlos Ari Sundfeld, in his article in the *Legal Guide to Public-Private Partnerships*, discusses that, broadly speaking, PPPs involve continuous business links between the Public Administration and private entities to develop activities of general interest. It differentiates these partnerships from common contracts that do not generate ongoing relationships or common legal interests. Sundfeld points out that, in contracts that create shared interests and extend over time, it is essential to discipline the coexistence between the contractors and define the distribution of contributions, responsibilities and risks of the enterprise.

For green finance to be increasingly incentivized and secure, it is crucial that projects are well-designed and that contract modeling is robust and comprehensive.

It appears that the main objective of PPPs, governed by Brazilian Federal Law No. 11.079/2004, has characteristics, determined as central. The legislation mentioned above is designed to balance the contractual relationship, ensuring that the concessionaire, who makes initial investments at the beginning of the project, will be compensated later. It also establishes the commitment of the public manager to ensure timely remuneration, providing legal certainty for both the concessionaire and the granting authority regarding the basic requirements of the future partnership

Thus, throughout the contractual execution, both partners, the granting authority and the concessionaire, need to delimit spheres that allow reaching the final objective of the bid object: the provision of services and execution of the construction of urban infrastructure effectively.

The distant relationship formed in these contracts brings challenges such as risk allocation, balanced contractual forms and adequate remuneration.

A PPP made by state entities usually has risks to be observed, such as:

- Risk of analyzing the commitment of future public resources;
- Risk of technical incapacity of the Management, which may result in improper distributed modeling in the aspects of determination of the object, identification of risk and its attribution to the parties and the evaluation criteria;
- Risk of the regulatory environment, whether environmental, technological or new public obligations;
- Risk of unforeseeable circumstances and force majeure, among others.

"Well-structured projects that integrate elements of a more resilient urban infrastructure combined with climate security increase their attractiveness to funders by mitigating risks associated with extreme weather events and ensuring continuity of operations."

Brazil

In the Brazilian government, the Public Private Partnership, regulated by the law 11.079/2004, is one of the main instruments used to make investments in infrastructure. This establishes ‘the efficiency in fulfilling the missions of the State and in the use of society's resources, the objective distribution of risks between the parties and the financial sustainability and socioeconomic advantages of partnership projects’ [1].

It is therefore a viable instrument to effect and positively trigger the design of new contractual infrastructure artifacts and the deployment or sedimentation of green financing and efficient climate insurance, so that projects can develop assertively.

We will discuss the ‘new risks’, which are being studied or made compatible with existing ones, since the 2019 health crisis (COVID-19), the risks of unforeseeable circumstances and force majeure caused by extreme climate change that affect urban infrastructures.

In addition, it is necessary to understand that the business models, developed in the public interest, respond to the challenges of the various risks and opportunities, by developing relevant contractual aspects to mobilize and guarantee the execution of the object, even in extreme climate change, they will be less exposed to the negative impacts of climate change and consequently gain competitiveness in an environment of greater instability.

In financial terms, it is estimated that the costs of actions required in response to the risks of climate change are significantly lower than those arising from inactivity. According to an analysis carried out by the US Geological Survey and the World Bank, involving eight countries, an investment of 40 billion dollars made by the public and private sectors can avoid losses of 280 billion by 2030 (UN GLOBAL COMPACT, et al., 2011, p. 16)[1].

Given that some public services, concession and PPP objects, are expected to be impacted by climate change, it is crucial that the bidding process for contracting these services, as well as the monitoring of ongoing projects, establish guidelines and criteria directly related to adaptation to climate change.

It is suggested, therefore, that the projects include in the diagnosis of risks and opportunities an analysis based on climate scenarios.

This should serve as the basis for initial decisions about the geographic area and applied technologies, as well as for periodic reviews, evaluations and adjustments.

It is, therefore, an agenda for adapting partnerships, governed by the Brazilian PPP Law (11.079/2004), to climate change. In this context, PPPs emerge as instruments that expand the range of investments and new financing and insurance modalities, allowing the private sector to act in priority areas where, otherwise, the free market would not be so present.

The inclusion of specific adaptation criteria both in the contracting of new projects and in the review of ongoing projects ensures that initiatives are aligned with adaptation and resilience needs. This maximizes the impact and effectiveness of the actions taken, ensuring that projects are more robust in the face of climate change.

The roles played by the public and private sectors are essential to address the challenges of climate change, highlighting the importance of synergy between both to support and complement actions that optimize climate adaptation measures, especially in the financial and legal sectors.

“Government actors, in particular, should use their regulatory power to facilitate the development of actions, avoiding the imposition of obstacles.”

Government actors, in particular, should use their regulatory power to facilitate the development of actions, avoiding the imposition of obstacles. It is necessary to establish guidelines for the risk and equity management of banking institutions, incorporating innovations that consider future risk scenarios. To reduce risks, the public sector is dedicated to data collection and basic research, in addition to fostering risk awareness.

On the other hand, the private sector invests in risk modelling. When it comes to improving resilience measures, the government is responsible for regulation and enforcement, while the private sector encourages the development of innovative products.

In relation to risk transfer, it is facilitated by the government through guarantee funds and volatility mitigation, and by the private sector through insurance and services for public projects. In disaster relief, the government uses risk reduction and pre-financing in a restricted way. In contrast, the private sector offers flexible business terms during emergencies, services for public projects, and insurance for climate impact claims.

In capacity building, the government provides financing or openness to the regulation of affected sectors, while the private sector offers technical assistance and expertise.

This overview illustrates how the granting authority, in the planning phase, assists the private sector – bidder and future concessionaire – in responding to legal studies and modeling.

This collaboration prepares the private sector for future public-private partnership projects, increasing the effectiveness of climate change adaptation initiatives.

"In disaster relief, the government uses risk reduction and pre-financing in a restricted way. In contrast, the private sector offers flexible business terms during emergencies, services for public projects, and insurance for climate impact claims."

It should be briefly indicated that the climate adaptation agenda does not disregard the objective risk allocation and contractual efficiency based on risk allocation.

However, we seek to indicate that it is necessary to rethink, based on other contractual artifacts, possibilities of safeguarding and subsidizing that the private market and the public sector can initiate, the adaptation of contractual parameters, which do not at first give rise to an exhaustive and endless discussion of risk reallocation, on the contrary, that seek synergy through other instruments.

Case Study: Pampulha Airport, Brazil

As an example, the modeling carried out at Pampulha Airport, located in Brazil, in the State of Minas Gerais, in the city of Belo Horizonte. The modeling presented included the Sustainable Development Indicator, with criteria that are used to monitor the contractor by the Independent Verifier, impacting the execution of the contract, if it does not reach, at least, sustainability factors, giving rise to penalties.

Among the criteria, climate change management includes several essential approaches and strategies for reducing and adapting to greenhouse gas emissions. A key component is the greenhouse gas emissions inventory, which records the atmospheric emissions generated by the aerodrome.

In addition, the elaboration of emission indicators is crucial, which allows monitoring the evolution of emissions based on the inventory, helping to analyze the effectiveness of the measures implemented. The development of a mitigation plan for greenhouse gas emissions is also an important part of this strategy, involving the definition of targets for reducing emissions, both in absolute terms and in relation to specific indicators, which is aligned with the commitments supported by Brazil at COP 28.

The modeling also indicated a plan to adapt to climate change, including studies on the need to adapt to possible future climate changes, such as the increase in the number of extreme weather events, sea level rise, and variations in temperatures and rainfall. Indicating that the presentation of these studies would guarantee the continuity of operations and the availability of air services in the future, facing the challenges imposed by climate change.

The studies for the modeling of Pampulha Airport were carried out in 2020. These studies highlight the need to develop, in a constructive way, new contractual artifacts that can help in adapting contracts to the new climate reality. It is important that these obligations are supported by financing that ensures safety in the development of products and proposed solutions.

In addition to the development of consistent contractual modeling, it is crucial to consider the inclusion of climate insurance as components. These insurances provide additional security during all phases of the project, covering risks associated with extreme weather events and other environmental uncertainties that may affect the viability and success of the project.

The implementation of climate insurance from the initial project finance phase of a PPP ensures the long-term resilience and sustainability of the project. Although this topic is still incipient, its exploration and integration are essential to ensure that investments in green infrastructure and sustainable projects are protected against climate adversity, thus promoting a safe approach to sustainable development.

Climate Insurance and its Role in PPPs

Climate change is increasing the frequency and intensity of extreme weather events, such as floods, droughts and storms, that directly impact various economic sectors, including the insurance sector. This sector plays a crucial role in mitigating climate risks, offering protection against financial losses and enabling business in the capital market.

The integration of climate insurance in PPPs projects is essential to ensure that both the private sector and the government are protected against the impacts of climate change throughout the concession of the service. This process involves a meticulous approach that considers the assessment, management and transfer of climate risks from the initial design phase of the project.

The integration of climate insurance in PPP projects is essential to ensure that both the private sector and the government are protected against the impacts of climate change throughout the concession of the service.

To begin with, it is critical to conduct an initial assessment of the climate risks that may affect the project. This includes analyzing climate scenarios using projection tools that help predict potential climate change in the coming decades. These scenarios will allow identifying risks such as floods, droughts, heat waves, and changes in precipitation, which can impact project infrastructure and operations.

Based on this assessment, data on specific climate risks for the project area can be developed. This data will identify high vulnerability zones and help assess critical infrastructure exposure, enabling more accurate and effective planning.

Integrating climate risks into project design is the crucial next step. This entails incorporating climate resilience criteria into planned infrastructures, adopting sustainable construction practices and materials resistant to extreme weather conditions. In addition, mitigation and adaptation plans should be developed to reduce greenhouse gas emissions and minimize the impacts of extreme weather events, such as the implementation of improved drainage systems to prevent flooding.

The detailed analysis of climate insurance to be inserted in PPP projects is crucial to ensure the economic viability of the project. From an accurate assessment of climate risks, it is possible to identify which insurance is essential to mitigate risks without financially burdening the project. This balance is vital to ensure that the Internal Rate of Return (IRR) remains attractive to investors, without burdening the public partner with excessive costs.

Thus, it is necessary to find a balance between adequate protection against climate risks and the economic sustainability of the project, ensuring the safety and continuity of the services provided without compromising the financial viability for both parties involved.

Another important element that can be created is a contingency fund, financed by both the government and the private partner, to cover climate risks that are not insurable or that exceed the coverage of the contracted insurance. This fund offers an additional layer of financial security, ensuring that resources are available to cope with unforeseen situations.

The inclusion of specific contractual clauses is vital to outline the responsibilities of each side in managing and mitigating climate risks. These clauses must define mechanisms for the periodic review of contracted insurance and adjustments according to the evolution of climate risks.

In addition, setting up a climate risk management committee, composed of representatives from government, private partner, and climate experts, can be beneficial to monitor risks and implement necessary measures on an ongoing basis.

Finally, continuous monitoring of weather conditions is critical. The implementation of climate monitoring systems will allow us to monitor changes in climate conditions and predict extreme events. Data obtained through this monitoring should be used to adjust mitigation and insurance plans as needed. Periodic audits and reviews will help assess the effectiveness of the measures implemented, ensuring that insurance policies and contingency plans are updated according to new climate projections and audit results.

In summary, integrating climate insurance into PPP projects from the outset not only financially protects the private sector and government, but also promotes the resilience and sustainability of infrastructure.

This integrated approach ensures the continuity of essential services even in the face of climate disasters, contributing to a safer and more sustainable future.

Natural disasters in 2024

1. Storm “Boris” sweeps through Central Europe.
2. From Mali to Sudan, floods turn Sahara into an ocean
3. Typhoon Yagi wreaks havoc in Asia

Green Financing for PPPs

In the pursuit of encouraging and guaranteeing the security of green financing, it is essential that projects are meticulously designed and that the contractual modeling is solid and detailed. The consideration of climate change and the inclusion of climate insurance are key elements in this process. Well-structured projects that integrate these aspects not only mitigate risks associated with extreme weather events, but also increase their attractiveness to funders.

PPPs are being used and can increase their performance to implement green infrastructures, as well as to manage and preserve natural resources and different ecosystems. It is worth mentioning that infrastructure serves not only for economic progress, raising the standard of living of the population, but also helps to reduce the negative impact on the environment.

The private sector can use green financial instruments within climate resilience PPPs to fund their initial investment. The recent reforestation concession plan presented by the Brazilian government is an example of how nature-based PPPs can operate. In this case, the initiative aims to recover 15,000 hectares of Amazon rainforest, with an investment of R$600 million.

The main source of revenue will be the sale of carbon credits, complemented by sustainable exploitation, with strict rules, of wood and forest products.

This model demonstrates how PPPs can leverage private investments to promote environmental restoration and generate sustainable financial returns.

Recent events, marked by environmental crises and a growing awareness of the urgency of addressing climate change, have catalyzed the creation of various forms of green finance. Extreme weather events, such as floods, droughts and forest fires, have highlighted the need to invest in sustainable and resilient solutions. In response, governments, financial institutions and the private sector have started to develop and promote innovative financial instruments, aimed at supporting projects that value nature.

Among the instruments available are green bonds, such as asset-backed bonds, which are bonds linked to specific green projects, such as infrastructure. The main attraction of asset-backed bonds is that they offer investors additional security, as interest and principal payments are backed by the cash flows generated by the underlying assets.

These bonds can be issued to finance renewable energy, energy efficiency and waste management systems projects, providing both a financial return and significant environmental benefits.

Another type of financing is green loans, which are “any type of loan instrument made available exclusively to finance or refinance, in whole or in part, new and/or existing eligible green projects”.

An example would be a bank granting a loan to a utility company to build a sustainable desalination plant. In this context, a PPP could be formed between the government and a private company to develop and operate the plant, ensuring the supply of drinking water in areas affected by scarcity, while using technology that minimizes environmental impact.

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Conclusion

In conclusion, financing and insurance for climate risks in PPPs represent crucial tools for promoting sustainable and climate resilient infrastructure. PPPs, when well structured with innovative financial mechanisms such as green bonds and parametric insurance, can mobilize substantial resources for climate adaptation and mitigation of environmental impacts. The introduction and implementation of climate risk insurance is essential for the viability and sustainability of PPP projects.

These insurances provide an additional layer of financial security, covering risks associated with extreme weather events that could compromise the operation and longevity of projects, as well as ensuring performance investments in climate resilience.

Climate resilience, as addressed in this research, is understood as the ability of natural, human and economic systems to withstand, adapt to and recover from the adverse impacts of climate change, maintaining their essential functionality and preserving the ability to respond to future disruptions. It involves not only mitigating the negative effects of climate change, but also adapting to new climate conditions, adapting existing contractual frameworks.

An example would be a bank granting a loan to a utility company to build a sustainable desalination plant. In this context, a PPP could be formed between the government and a private company to develop and operate the plant, ensuring the supply of drinking water in areas affected by scarcity, while using technology that minimizes environmental impact.

By identifying, assessing and mitigating risks from the early stage of the project, the parties involved can ensure that investments are protected against climate adversity. In addition, the integration of adaptation criteria in PPP contracts, as exemplified in the case of Pampulha Airport in Brazil, demonstrates the importance of incorporating sustainability and resilience practices in infrastructure projects.

Collaboration between the public and private sector is vital to address the challenges of climate change. The synergy between these sectors allows the creation of innovative solutions that not only drive economic development, but also promote environmental sustainability. Effective regulation and risk management are essential components to the success of these partnerships, ensuring that projects are executed in an efficient and sustainable manner.

Finally, it is necessary to rethink and adapt current contractual models to respond to new climate realities. Adopting new contractual artifacts that promote synergy between the public and private sectors, without overly focusing on risk reallocation, can facilitate the implementation of more resilient solutions.

This brief study demonstrates the importance of an integrated and innovative approach to ensure that well-designed PPPs effectively contribute to the growth of green finance, contributing to climate resilience, promoting sustainable and secure development for the future.

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- Best practices exchange among PPP professionals

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Email: jbisbey@wappp.net

Philanthropy in PPPs Chapter: Unlocking the Untapped Potential of Philanthropy

BY MAX VON ABENDROTH

The Philanthropy in PPPs Chapter serves as a trusted bridge between the philanthropy and PPP landscapes, aiming to unlock the untapped potential of bringing PPPs together with the catalytic impact of philanthropy.

To achieve this, we need to look beyond the annual giving of €54.5 billion by philanthropic organisations in Europe, which supports numerous causes crucial to advancing our societies.

"Philanthropy serves as a crucial catalyst, bridging the gap between funding and transformative societal change."

Whether it is funding scientific research for the development of the COVID-19 vaccine, fighting child labour in Cote d'Ivoire, or transitioning fossil fuel energy systems to renewable energy in 19 countries worldwide, philanthropic funding alone would not have achieved a lasting societal impact.
The real transformational change comes from philanthropy's unique catalytic role when partnering with other foundations, as well as the public and private sectors.

In 2023, The Partnering Initiative (TPI), teamed up with WAPPP and launched the 'PPPPs for People & Planet' programme that has identified the catalytic role philanthropy can play when partnering with the public and private sectors.

"True transformation happens when philanthropy and PPPs join forces to tackle the world's most pressing challenges."

The key learnings have been published in the report, *'Systems Change Activation: Empowering philanthropy's catalytic role in transformational PPPPs*' and some of them are shared here:

- Process, and potentially coordinating the partnership's activities, bringing credibility as a connector, and enabling dialogue among partners;
- Cocreating and codesigning PPPPs with public and private partners and, if appropriate, with peer organisations; providing a steady input of energy and momentum;
- Initial and catalytic funding of a PPPP set up and running costs (but not the cost of implementing the transformation);
- Capacitating partners to be able to play their roles in the PPPP and accelerate progress with technical assistance. Philanthropy often brings the technical expertise to develop new models and can support partners as they adopt new ways of working;
- De-risking a PPPP for other partners such that it can tackle the most difficult challenges and then reach large scale by mobilising mainstream private sector investors;
- Enabling PPPPs to be able to test and learn through multiple iterations of a solution, and by prototyping innovative ways of working.

This unique aspect of philanthropy has an unexpected impact, as no other entity can catalyze the systemic changes required to create a socially just and environmentally sustainable future.

The Philanthropy in PPPs Chapter aims to share case studies and insights across thematic areas and regions through webinars and conference sessions. It also seeks to promote and expand the joint *WAPPP & TPI PPPs Library* while supporting the emerging community of practice in this new field.

Join this Chapter to explore the potential of public-private-philanthropy partnerships and co-develop capabilities across the field to enhance the impact of these collaborations.

Harnessing Green Levers: The Energy Transition in Ports and Terminals Through Public-Private Partnerships

BY NEIL DAVIDSON & ERIK WEHL

Neil Davidson and Erik Wehl of the WAPPP Port Chapter, reflect on the discussions from an online roundtable event held in May 2024 by WAPPP, with support from UNCTAD. Speakers included representatives from The World Bank, DP World, Port of Gothenburg, and the African Development Bank, who shared insights on the ideas discussed and the challenges identified.

Source:www.apmterminals.com

Electrified equipment is key to reducing emissions in port operations

Governments, port authorities, and terminal operators are increasingly exploring innovative ways to make ports greener. This multi-faceted challenge involves deploying electrified equipment for cargo handling, transitioning to cleaner fuels for ships, and utilizing port land and water for clean energy generation.

These initiatives necessitate collaboration and risk-sharing among various stakeholders, which are pivotal elements of port and terminal concession agreements (Public-Private Partnerships).

Catch the full conversation on WAPPP's YouTube Channel: Next Level PPP's

Title: WAPPP & UNCTAD: Opps for "green" levers in port concessions in the context of zero-emission cargo

https://youtu.be/wpGizvfO-YM?feature=shared

In October 2023, DP World, an Emirati multinational logistics company based in Dubai, UAE and APM Terminals, a port operating company headquartered in The Hague, Netherlands, released a groundbreaking white paper titled *Reaching a Tipping Point in Battery-Electric Container Handling Equipment.* This report calls for action from the entire port ecosystem and highlights four key levers for accelerating the adoption of Battery-Electric Container Handling Equipment (CHE).

Notably, one lever targets port authorities and public entities, advocating for the integration of green levers in port and terminal concessions.

The proposed green levers include:

- Awarding extra credits to concession bids with zero-emission fleets
- Requiring that bids for new concessions utilize zero-emission fleets
- Extending concession durations only to terminal operators who commit to replacing diesel fleets with zero-emission CHE
- Offering favorable financial lease terms or discounts to terminal operators investing in zero-emission CHE fleets
- Assisting terminal operators with the necessary infrastructure adjustments for zero-emission CHE fleets.

Battery-electric container handling equipment represents the future of sustainable port operations.

Early Days for Green Initiatives

The industry is still in the early stages of implementing these green levers, and significant uncertainty remains regarding the overall decarbonization narrative. For instance, the African Development Bank is developing a Green Ports Certification Scheme to support these initiatives. There is also a clear need for capacity building in expertise and knowledge.

A critical consideration, particularly regarding Battery-Electric CHE, is the feasibility of providing electrical power for charging and the environmental impact of that power. The challenge extends beyond designing, supplying, and operating the CHE; it also involves the broader power infrastructure of the port and the country. Developed regions such as North America, Europe, and parts of Asia are better positioned than many emerging markets, which often have more rudimentary infrastructure to address before Battery-Electric CHE can be considered. Ultimately, success hinges on the specific location rather than the terminal size.

Source:www.apmterminals.com

New Concessions Favor Green Levers

The most practical method for introducing green levers into port concessions is during the bidding process for new concessions. With a clean slate, port authorities and governments can reward bidders offering greener options, although some uniformity will be necessary to ensure fair comparisons.

Providing favorable concession financial terms to terminal operators investing in zero-emission CHE fleets raises the sensitive issue of funding. Public port authorities must avoid being perceived as the primary financiers for such investments, given their public and social remits. It is crucial that both parties achieve a win-win solution.

Competition rules also play a role, as any discounted concession fees must be justifiable, fair, and legal. Some ports already offer discounted port dues for environmentally friendly vessels, such as those recognized by the International Association of Ports and Harbors' Environmental Ship Index, but this involves fixed, publicly published tariffs, unlike privately negotiated concessions. Financing green levers in port concessions is significant, as every concession must ultimately be bankable. Could a greener concession lead to better interest rates or loan availability? While Environmental, Social, and Governance (ESG) financing is on the rise, it is still early days for this question. Nevertheless, greener port concessions may enhance bankability.

The Role of Regulation

The World Bank argues that port authorities and governments cannot be expected to bear the costs of green initiatives in terminals without first addressing broader regulatory frameworks established by international bodies such as the International Maritime Organization (IMO). Instead of shouldering additional costs and risks, port authorities should operate within a clearly defined regulatory framework. Internationally agreed rules, akin to established emission control areas (ECAs) for shipping in Europe and North America, would provide a solid foundation for greener concession negotiations.

Multilateral development banks can also facilitate financing and provide technical assistance aligned with their policies and programs.

"The transition to greener ports requires collaboration across the entire ecosystem—governments, port authorities, and terminal operators must unite."

Technological Advancements on the Horizon

The DP World-APM Terminals white paper emphasizes the exponential growth of new technologies reaching a tipping point when they become more competitive than conventional options across affordability, attractiveness, and accessibility.

Historical examples like telegraphs and electric power, along with recent trends in solar power and electric vehicle sales, suggest that widespread use of Battery-Electric CHE may be closer than anticipated.

To support this aim, DP World and APM Terminals are forming the Zero Emission Port Alliance (ZEPA), a structured group designed to promote knowledge sharing, accelerate implementation, and improve business relationships while adhering to antitrust laws.

Membership is open to terminal operators, ports, equipment manufacturers, and government entities.

Collaboration among terminal operators, equipment manufacturers, and governments is vital for achieving a sustainable port ecosystem.

Challenges with Existing Concessions

In the context of port concession PPPs, most global port and terminal concessions are already established, making it challenging to extend, renew, or renegotiate them to incorporate green levers.

As noted by the Port of Gothenburg, green considerations were minimal in most new concessions just a decade ago. The complexity of renegotiating existing concessions will increase with the introduction of green elements, but the market is likely to adapt.

"As technology evolves, the potential for battery-electric solutions in ports could be closer than we think."

Green Finance: Advancing Sustainable Development Through Public-Private Partnerships

BY ENG. HEBAH ABBAS

In November 2023, Eng. Hebah Abbas, Strategic Technical Advisor and Chairwoman of the Sustainability Committee at the Kuwait Water Association, spoke at the 2023 Pearl Bay Investment and Financing Conference in China, which focused on 'Climate Finance for a Better World'. She participated in a panel titled 'Join Hands in Building the Green Silk Road', discussing climate finance, PPPs, and global cooperation.

Following this, she continued the conversation at the 15th meeting of the Arab Committee on the Implementation of Sustainable Development Goals in Cairo, Egypt. Eng. Abbas is committed to exploring the evolving landscape of green finance and the transformative potential of PPPs. In this article, she shares her insights.

As the world faces escalating challenges from climate change and environmental degradation, green finance has become increasingly vital. Encompassing investments and financial instruments that support sustainable development, green finance is essential for meeting the Paris Agreement objectives and the United Nations' Sustainable Development Goals (SDGs).

Concurrently, public-private partnerships (PPPs) have emerged as powerful mechanisms to mobilize the resources and expertise required to drive effective green finance initiatives.

Defining Green Finance and its Role

Green finance refers to investments that provide environmental benefits within the broader scope of sustainable development. This includes funding for renewable energy projects, energy efficiency improvements, sustainable agriculture, and other initiatives aimed at reducing carbon footprints and enhancing environmental sustainability.

By channeling financial flows toward green projects, green finance supports the transition to a low-carbon, sustainable economy. This transition is imperative given the increasing severity of climate-related impacts on global economies, ecosystems, and communities.

Unlocking the Benefits of Green Public-Private Partnerships

PPPs are collaborative arrangements between government entities and private sector companies designed to finance, develop, and operate projects that serve the public interest. When applied to green finance, PPPs effectively combine the strengths of both sectors to foster sustainability. Key advantages of PPPs in green finance include:

- **Capital Mobilization:** The scale of funding required to address environmental challenges often surpasses the capacity of public budgets alone. PPPs enable governments to attract substantial private sector investment for green projects. Public entities can reduce perceived risks for private investors by providing initial funding or guarantees, making green projects more financially attractive and viable.

- **Innovation and Expertise:** Private sector companies bring advanced technologies and innovative approaches to green projects, enhancing their efficiency and impact.

PPPs facilitate the transfer ofknowledge and expertise from the private sector to public initiatives, fostering a collaborative environment for deploying cutting-edge solutions to environmental challenges.

- **Risk Sharing:** Large-scale green projects often involve significant risks, especially in their early stages. PPPs support private investment by sharing these risks. Governments can offer financial instruments such as guarantees, insurance, and subsidies to mitigate risks and enhance the appeal of green investments. This risk-sharing mechanism is essential for deploying new technologies and scaling green projects.

- **Long-Term Commitments:** PPPs generally involve long-term contracts that align with the extended timelines of sustainable development goals. Such commitments ensure that green projects are maintained and operated sustainably over their lifespan, providing ongoing environmental benefits and contributing to the stability and predictability of investor returns.

Successful Examples of Green Public-Private Partnerships

Several successful green PPPs illustrate the potential of these collaborations

1. Array Offshore Wind Farm, London:
One of the largest offshore wind farms globally, developed through a PPP involving public sector support and private investment from companies like E.ON and Ørsted (formerly DONG Energy). This project significantly advances the UK's renewable energy targets.

2. Gujarat Solar Park, India:
A landmark project developed through a PPP between the Gujarat state government and private solar power developers, it has become one of Asia's largest solar power plants and a model for large-scale renewable energy projects.

3. Lake Turkana Wind Power Project, Kenya:
Africa's largest wind farm, developed through a PPP, has increased Kenya's electricity generation capacity by 17%, showcasing the significant impact of PPPs in enhancing green energy infrastructure and supporting sustainable development in the region.

Navigating Challenges in Green Finance Through PPPs

Despite notable achievements, challenges persist in green finance through PPPs:

1. **Regulatory Hurdles:** Many countries' regulatory frameworks are not fully aligned with green finance requirements. Inconsistent regulations and a lack of standardized policies can create uncertainty and deter investment. Clear and consistent government policies are crucial for the successful implementation of green finance initiatives.
2. **Insufficient Risk Mitigation:** Green projects often involve innovative technologies and untested methods, carrying higher risks. Without adequate risk mitigation mechanisms, such as guarantees or insurance, private investors may be reluctant to commit capital.
3. **Funding and Investment Gaps:** The substantial scale of funding required for green projects means that aligning public and private financing remains a challenge, despite PPPs' resource mobilization potential.

Addressing these issues requires governments to foster favorable regulatory environments, offer incentives for green investments, and establish clear PPP frameworks. Transparency, accountability, and active stakeholder engagement are also essential for the success of green PPPs.

Charting the Course Ahead

"Addressing regulatory hurdles and funding gaps is crucial for unlocking the full potential of green finance through PPPs."

The future of green finance through PPPs holds significant promise. As global awareness of environmental issues increases, so will the demand for sustainable projects. By strengthening collaborations between public and private sectors, we can harness the necessary resources and expertise to achieve sustainability goals.

Policymakers, investors, and stakeholders must work together to create supportive environments that facilitate the development and expansion of green PPPs.

Green finance, driven by effective public-private partnerships, is crucial for advancing sustainable development. By leveraging the strengths of both sectors, PPPs can mobilize capital, manage risks, and introduce innovative solutions.
Reinforcing these partnerships will be vital in addressing today's environmental challenges and guiding us toward a greener, more sustainable future.

“Green finance is essential to tackle climate change and ensure sustainable development. We must mobilize financial resources to support this transition.”

-Ban Ki-moon , Former UN Secretary-General

WAPPP

Financing Green Cities: Innovative PPP Solutions for Sustainable Urban Development

THIBAUT MOURGUES

As urban populations soar, cities face mounting challenges in sustainability, from traffic congestion to waste management.
Traditional funding methods often fall short in addressing the substantial investment needed for green infrastructure projects. This article explores how Public-Private Partnerships (PPPs) combined with innovative green finance solutions can bridge this gap.

By leveraging private sector expertise and capital, cities can accelerate the transition to greener, more resilient urban environments. Discover how these partnerships can unlock the resources necessary for sustainable development and create healthier living spaces for all residents.

Cities are at a crossroads. The world's population is rapidly urbanizing, and by 2050, it's estimated that over 68% of people will live in cities. This rapid growth puts immense pressure on urban infrastructure. Traditional challenges like traffic congestion and air pollution are compounded by the need to address climate change. Cities must become more sustainable – reducing their carbon footprints, managing waste effectively, and creating a healthy living environment for all residents.
Unfortunately, traditional financing methods often fall short of the resources needed for large-scale green infrastructure projects.

Municipal budgets are often stretched thin, and traditional sources of funding may not be enough to bridge the gap and achieve these ambitious sustainability goals.
This article explores how Public-Private Partnerships (PPPs) combined with green finance solutions can contribute to bring solutions. By leveraging private sector expertise, innovation, and long-term capital, PPPs can unlock the resources needed to accelerate sustainable urban development. Green finance instruments, such as green bonds and climate bonds, can be used to fund these projects, ensuring environmental and financial benefits for both the city and the private partners involved.

"Cities must become more sustainable—reducing their carbon footprints, managing waste effectively, and creating a healthy living environment for all residents."

The Challenge of Green Cities:

Modern cities are often described as vibrant hubs of innovation and opportunity. However, this very dynamism presents a complex set of challenges. Urban environments grapple with **environmental issues** that threaten the health and well-being of their residents. Air pollution, choked by vehicle emissions and industrial processes, can lead to respiratory illnesses and a decline in overall quality of life. Traffic congestion, a growing problem in many cities, not only wastes time and resources but also contributes to air pollution and noise levels.

Social challenges also arise from rapid urbanization. Inefficient waste management systems can create unsanitary conditions and attract pests. Sprawling development patterns can lead to social isolation and a lack of access to green spaces, essential for mental and physical well-being.
In response to these pressing issues, the concept of "green cities" has emerged. These cities prioritize sustainability by focusing on developing and implementing environmentally friendly solutions.

Green cities aim to create **sustainable transportation systems** that reduce reliance on private vehicles, such as expanding public transportation networks and promoting cycling and walking infrastructure.

They also focus on **green energy systems**, exploring renewable energy sources like solar and wind power to reduce dependence on fossil fuels and their associated emissions. Finally, green cities prioritize sustainable waste management, implementing efficient recycling and composting programs to minimize waste sent to landfills.

"Green finance connects investors seeking environmentally conscious investments with projects that deliver positive environmental and social benefits."

The Role of Green Finance:

Green finance is a rapidly growing field dedicated to mobilizing resources for environmentally friendly projects. As such, it harnesses the financial sector in supporting the transition to a low-carbon and climate-resilient economy.

Bridging the Green Infrastructure Gap: Traditional financing methods often fall short of the vast resources needed for large-scale green infrastructure projects in cities. Green finance offers a solution by attracting new sources of capital specifically dedicated to sustainable development.

Matching Investors with Impact: Green finance connects investors seeking environmentally conscious investments with projects that deliver positive environmental and social benefits. This allows investors to align their financial goals with a broader sustainability agenda.

Pricing Environmental Risks and Opportunities: Green finance instruments incorporate environmental factors into risk assessment and investment decisions. This encourages investments in sustainable solutions and discourages environmentally damaging activities.

Unlocking Innovation: Green finance fosters the development and adoption of innovative technologies and solutions for sustainable urban development. By providing dedicated funding streams, it allows cities and businesses to explore and implement new approaches to renewable energy, waste management, and green transportation.

Green Finance Instruments for Sustainable Cities:

Several specific financial instruments play a key role in mobilizing resources for green urban development:

- **Green Bonds:** These are fixed-income securities issued by governments, municipalities, or corporations to finance green projects. Investors receive periodic interest payments and the return of their principal at maturity. Green bonds are often labelled based on specific environmental benefits the project aims to achieve (e.g., renewable energy bonds, sustainable transport bonds).
- **Climate Bonds:** Similar to green bonds, climate bonds focus specifically on financing projects that mitigate climate change and promote adaptation to its effects. These bonds may have stricter eligibility criteria to ensure the project demonstrably addresses climate challenges.
- **Sustainability-Linked Loans:** These are traditional loans with an added twist. The interest rate charged is linked to the borrower's achievement of pre-defined sustainability performance targets (e.g., reducing carbon footprint, increasing recycling rates). This incentivizes borrowers to prioritize sustainability measures throughout the project lifecycle.

"Accessing private sector expertise allows cities to implement innovative and effective green infrastructure projects."

PPPs: A Catalyst for Green Finance in Cities:

Traditional funding methods often struggle to keep pace with the immense financial needs of green infrastructure projects in cities. Public-Private Partnerships (PPPs) emerge as a powerful tool to bridge this gap, accelerate sustainable urban development and unlock the necessary resources through the following characteristics:

- **Private Sector Capital:** PPPs leverage private sector investment alongside public funding. This allows cities to access a wider pool of capital, enabling them to undertake green infrastructure projects that might not be feasible with public funds alone.
- **Risk Sharing:** PPPs typically involve sharing risks and responsibilities between the public and private partners. This incentivizes private investors to participate by offering a potential for long-term returns, while mitigating some of the financial risks for the public sector.
- **Long-Term Commitment:** PPPs are often structured as long-term contracts. This fosters a collaborative environment where both partners have a vested interest in the project's success and its long-term sustainability goals.

Benefits of PPPs for Green Cities:

Beyond simply providing funding, PPPs offer several advantages for green cities:

- **Accessing Private Sector Expertise and Innovation:** Private companies often possess significant expertise in specific areas like green building technologies, renewable energy solutions, and efficient waste management systems. Partnering with private firms allows cities to leverage this expertise to design and implement innovative and effective green infrastructure projects.
- **Sharing Risks and Responsibilities:** Distributing risks between public and private partners encourages innovation and efficiency. The private sector often bears the risk of construction delays or cost overruns, while the public sector might manage regulatory hurdles or provide long-term operational support. This risk-sharing mechanism incentivizes both parties to focus on the project's long-term success.
- **Delivering Projects More Efficiently and Cost-Effectively:** Private companies often have a strong track record of delivering projects on time and within budget. Their focus on efficiency and profitability can translate into faster project completion times and potentially lower overall costs for green infrastructure projects.

"Public-Private Partnerships can accelerate the implementation of sustainable solutions in urban areas."

PPP Models for Green Urban Infrastructure:

Selected examples of PPP models for green urban infrastructure include:
Sustainable Transportation:

- **Building Electric Vehicle Charging Stations (EVCS):**

Model: Design-Build-Operate (D-B-O): The private partner designs, builds, finances, and operates the EV charging stations over a long-term contract. The city pays the private partner a fee per use or based on electricity sold.
Benefits: Faster deployment of charging stations, access to private sector expertise in charging technology and grid integration.

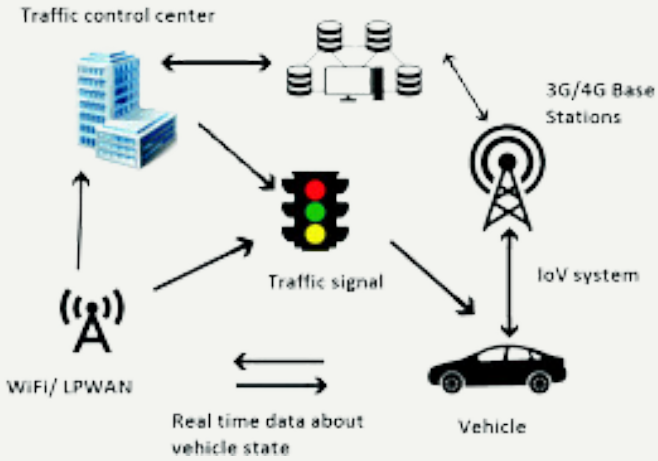
- **Green Public Transport Systems (e.g., light rail, electric buses):**

Model: Build-Operate-Transfer (BOT): The private partner finances, constructs, and operates the public transport system for a set period. After the contract ends, ownership is transferred to the city.
Benefits: Private sector investment in modernizing public transport, potential for innovation in ticketing systems and route optimization.

- **Smart Traffic Management Systems:**

Model: Public-Private Partnership (PPP) Concession: The city grants a concession to a private company to manage and operate the smart traffic management system for a defined period. The private partner may collect user fees (e.g., congestion pricing) to recoup investment costs.
Benefits: Access to private sector expertise in data analytics and traffic control technology, potential for real-time traffic monitoring and dynamic route adjustments to reduce congestion.

Sustainable mobility: Cities transforming transport for a greener tomorrow

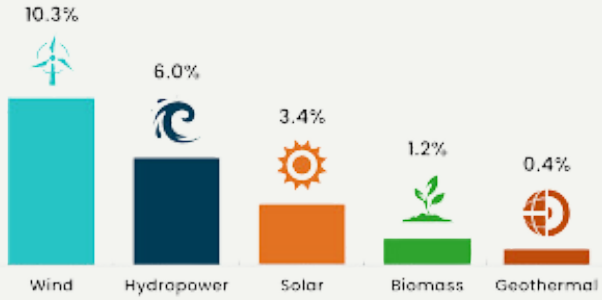


Green Energy Systems:

- **Financing and Operating Renewable Energy Sources:**

Model: Build-Own-Operate (BOO): The private partner finances, builds, owns, and operates a renewable energy facility within city limits. The city purchases electricity produced at a pre-determined rate through a long-term power purchase agreement (PPA).

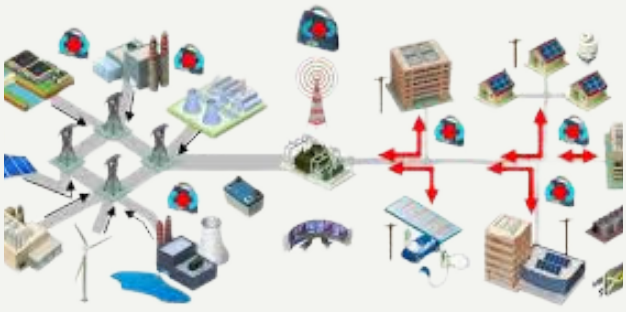
Benefits: Attracts private investment in renewable energy sources within the city, reduces reliance on traditional fossil fuel sources.



- **Upgrading and Modernizing the Energy Grid:**

Model: Joint Venture: The city and a private company form a joint venture to manage and upgrade the city's energy grid. The venture focuses on improving efficiency, integrating renewable energy sources, and enhancing reliability.

Benefits: Combines public sector resources with private sector expertise in grid modernization technologies, facilitates faster adoption of smart grid solutions.

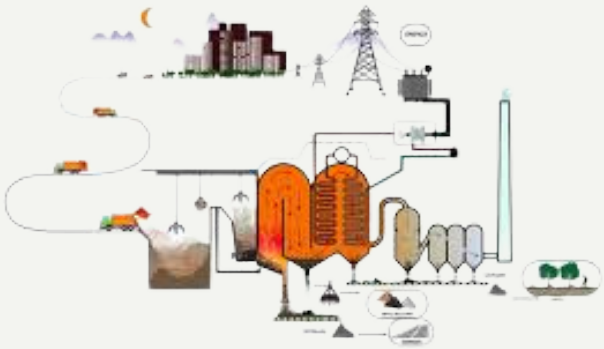


Waste Management:

- **Developing Waste-to-Energy Plants:**

Model: Design-Build-Finance-Operate (DBFO): The private partner designs, builds, finances, and operates the waste-to-energy plant over a long-term contract. The city pays the private partner a tipping fee for waste delivered to the plant.

Benefits: Attracts private sector investment in waste management infrastructure, reduces reliance on landfills and promotes energy generation from waste.



- **Advanced Waste Recycling and Composting Facilities:**

Model: Service Contract: The city contracts a private company to design, build, and operate advanced recycling and composting facilities. The city pays the company a fixed fee or a fee per ton of waste processed.

Benefits: Access to private sector expertise in innovative recycling technologies, potential for increased diversion of waste from landfills and promotion of sustainable waste management practices.

Challenges:

While Public-Private Partnerships (PPPs) offer a promising approach to financing green infrastructure in cities, there are some potential challenges to consider

- **Ensuring Long-Term Sustainability:**

Challenge: The short-term profit focus of private partners might not always align with long-term sustainability goals.

Solution: Develop clear project evaluation criteria that prioritize not just cost and efficiency but also environmental and social impact throughout the project lifecycle.

- **Managing Complex Contracts:**

Challenge: PPP contracts can be intricate, with numerous risk allocation clauses and performance metrics.

Solution: Ensure transparent and collaborative contract development with clear communication channels between public and private partners. Utilize independent experts to review contracts to avoid potential pitfalls.

- **Risk Allocation:**

Challenge: Striking a fair balance in risk allocation between public and private partners is crucial. Unexpected environmental issues or technological advancements can disrupt project execution.

Solution: Conduct thorough risk assessments upfront and consider innovative risk-sharing mechanisms. Develop flexible contractual terms that allow for adjustments based on unforeseen circumstances.

- **Transparency and Accountability:**

Challenge: Maintaining transparency and accountability in PPPs can be challenging due to the complex nature of these partnerships.
Solution: Implement strong governance frameworks with clear roles and responsibilities for all stakeholders. Regular progress reporting and independent audits can ensure accountability and public trust.

- **Capacity Building:**

Challenge: Public institutions may not have the necessary expertise to manage complex PPP projects, particularly in green infrastructure areas.
Solution: Invest in capacity building programs for public sector officials involved in PPP development and management. Seek external expertise from consultants or advisors with experience in green PPPs

"Building trust: Public engagement and accountability pave the way for sustainable PPPs."

Best Practices for Success:

- Project Selection: Carefully select projects that are well-suited for a PPP model and have a strong potential to deliver long-term environmental benefits.
- Stakeholder Engagement: Integrate community engagement throughout the PPP process to ensure public buy-in and address potential concerns.
- Performance Monitoring: Establish robust mechanisms for monitoring project performance against environmental and social sustainability metrics.
- Exit Strategy: Develop a clear exit strategy outlining the process for transitioning ownership and operation of the infrastructure back to the public sector at the end of the PPP contract.

Conclusion:

Public-Private Partnerships offer a promising approach to developing green infrastructure in urban areas, leveraging private sector expertise and capital while meeting public environmental goals.
These models can accelerate the implementation of sustainable solutions in the various areas that have been analyzed in this article.
However, success depends on careful structuring of contracts, equitable risk-sharing, and strong governance frameworks. Cities must also ensure that PPPs align with long-term sustainability objectives and provide tangible benefits to communities.
As urban areas face increasing environmental challenges, well-designed PPPs for green infrastructure represent a valuable tool for creating more resilient, livable, and sustainable cities.

Welcoming New Members to WAPPP's Leadership

We are thrilled to introduce the newest members of WAPPP's leadership team, bringing a wealth of expertise and diverse experience to further strengthen our community!

DR. VARUN GOYAL
CHAIR,
SOUTH ASIA CHAPTER

NEIL DHOT
CO-CHAIR
WATER CHAPTER

Four outstanding professionals have joined WAPPP's Social Sector PPP Chapter! Each brings a wealth of experience that will enhance our work in advancing social sector PPPs globally.

THIAGO GREGO

ANDREW THOMAS

ARUN KUMAR

GAZMIR VEHBI

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The Partnering Initiative (TPI) is a global not-for-profit. We are committed to the professionalisation of partnering practice and building the ecosystem in which partnerships can thrive.

For over a decade, TPI has been working extensively with a wide variety of stakeholders including companies, international NGOs, the UN system, global consortia, governments and donors.

We support professional competency building, institutional strategy and capacity, and partnership support services. Our aim is that all sectors of society can realize and maximize the benefits from strong, innovative and effective collaboration.

CONTACT

https://thepartneringinitiative.org/

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Training and capacity building programmes designed to build a set of skills that are essential for effective partnering.

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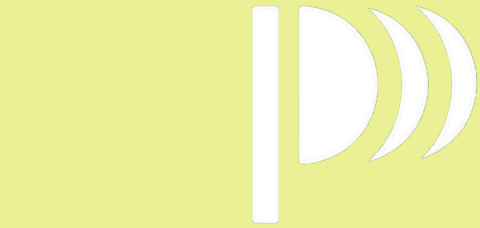
Scoping and facilitating partnerships, undertaking evaluations and reviews, troubleshooting, expert secretariat services, guidance through case studies.

WAPPP members are offered an exclusive 25% discount on TPI's open training courses.
Please use code WAPPP25 at checkout.



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