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The World Bank's Changing Conditionality for Flood Risk Management: Analysis Over Six Decades

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ABSTRACT

The World Bank is a leading global institution for disaster risk management, the bulk of which is dedicated to flood risk management (FRM). Due to the Bank's power as a lending agency and the global distribution of flood risks it has addressed, the Bank's project financial agreements (FAs) are an expression of a power relationship worthy of detailed investigation. These FAs present an opportunity in which the Bank could impose its policy preferences and set the parameters for FRM in recipient countries, thus illuminating both an important driver for change and the Bank's fundamental *modus vivendi*. This paper uses qualitative content analysis to investigate 52 FAs from 1975 to 2023, searching for patterns in the FRM measures they emphasise. We examine how FRM measures advocated by the Bank have changed over time, finding that the Bank has used its power to promote early adoption of integrated structural and non-structural FRM strategies in a mutually reinforcing complementary arrangement. The Bank advanced integrated FRM approaches well before other international bodies and national agencies and thus features as a world leader in this respect. We also find that common criticisms of neoliberalism and gender equality against the Bank are not entirely unfounded, but progress has occurred in these directions in recent years.

1 | Introduction

The World Bank (Bank) is a crucial global institution for recovery after environmental disasters, including after major flood events. The Bank is 'the global leader in disaster risk management', with a 2022 disaster risk reduction (DRR) portfolio of projects worth $34.2 million—the majority of which comprised urban and river flooding projects (World Bank 2023, vii). As such, coupled with the idea of flooding as a policy 'focusing event' which can manifest new, unanticipated policy regimes (Penning-Rowsell et al. 2006), the Bank has immense power to influence flood recovery, response, and overall flood risk management (FRM) activities in recipient countries. Thus, the financial agreements (FAs) which cement these projects both create the legal framework for project spending and represent a power relationship with the recipient country by establishing parameters for valid FRM response.

Birkland's (2016), 6) definition of power in the context of environmental hazards aligns closely with the Bank's FRM projects: power is the ability of an institution to control and disperse funding, provide services, approve courses of action, direct rewards and punishment, and influence how information is interpreted. In addition to these abilities, the power differential between the Bank and its client countries is exacerbated by (a) the geopolitical distribution of flood risks it has addressed, and (b) the inherent inequality of a lender-borrower relationship. Regarding the former, flood risks are skewed toward developing and low- and middle-income countries, due to both hydrological and social/governance factors (Luo et al. 2015; McLindin 2019; Rentschler et al. 2022). For this reason, DRR is a core tenet of the Bank's strategy toward poverty reduction (World Bank 2023). Relatedly, recipient countries are dependent on aid because of their pre-existing lack of capital and other resources (Güven 2012; Meigh and Bartlett 2010). This aid is, in part, intended to make up for global inequality between countries.

In other words, it is not simply that flood risks are concentrated in certain geographies, but that there is a multitude of social and institutional factors that contribute to a country's flood response capabilities, which are further situated within global discrepancies of resource availability and institutional capacity (Ajibade 2022). With its high spending on flood-related aid, the Bank has the unrivalled opportunity to exercise top-down policy prescriptions and create the parameters for specific actions within recipient countries (Boli and Thomas 1999; Lloyd and Weissman 2002; Meyer et al. 1997).

Enactments of power are also often dynamic, changing over time in response to different factors (Bubeck et al. 2017; Penning-Rowsell et al. 2006). One mechanism of power from the World Bank is conditionality: the criteria a recipient country must meet before the Bank disburses funds (World Bank 2005). Indeed, the Bank's financial conditions have themselves modified over time, both as social norms have evolved and in response to threats to its reputation and legitimacy (Cormier and Manger 2020; Güven 2012; Jones 2018). The Bank itself has come to emphasize that it is also a 'Knowledge Bank' imparting best practices and technical assistance within its projects, in addition to the dispersal of funds (World Bank 2024).

Whilst the Bank's General Conditions for aid lending have been researched (World Bank 2005), no investigation has focused on its flood projects. There has been an assessment of some specific Bank FRM projects (Meigh and Bartlett 2010; Molenaar and Van Santen 2006; Munasinghe et al. 1991; Penning-Rowsell 1996; Sharma 2021), but there is a research gap in examining flood projects as a collective to determine changes over time.

This paper therefore seeks to contribute to our understanding of the Bank's crucial but changing role vis-à-vis FRM. We investigate Bank FAs for flood projects from 1975 to 2023 in terms of: (1) which FRM strategies are prevalent to track the way the Bank has evolved in its approach to FRM over time, and (2) whether flood projects are subject to the same criticisms of policy prescription as are other Bank activities (Bayliss and Fine 1998; Boli and Thomas 1999; Meyer et al. 1997; Van Waeyenberge et al. 2015). Critiques toward the Bank illuminate not only the Bank's moral position, but how norms of Bank lending may have changed over time within FRM projects. Our analysis covers six decades and complements a recent evaluation of the Bank's support for DRR in terms of its relevance and effectiveness, covering all environmental hazards but only from 2010 to 2020 (World Bank 2022).

The following sections describe the FRM strategies and Bank critiques which form the basis of our analysis of Bank FAs. We tackle these with the methodology of qualitative content analysis, explain the results from examining 52 Bank flood project FAs, and end with the implications of these findings and our associated conclusions.

2 | FRM Approaches: Structural/Non-Structural

For a long time, the prevalent approach to flood risk was structural: engineering-led physical infrastructure to control and move flood waters (Lintsen 2002; Pahl-Wostl 2007; Werritty 2006). Over time, this changed into a structural/non-structural dichotomy, as flood risk managers increasingly recognised that solutions beyond physical infrastructure were needed (Harries and Penning-Rowsell 2011; Parker 2007), a recognition with roots dating to the 1940s (Macdonald et al. 2012; White 1945). The World Bank acknowledges the dichotomy of structural/non-structural interventions in its Urban Flood Risk Handbook (Ferguson et al. 2023) and explicitly in flood projects as early as 2006 ('2006 Argentina P088220' 2006). Therefore, this analysis will use the structural/non-structural dichotomy from Parker (2007) as also used by Harries and Penning-Rowsell (2011) (Figure 1). FRM projects are considered 'integrated' here when they use both structural and non-structural measures in a mutually reinforcing complementary arrangement (see Morris and Samuels 2006).

The central premise of investigating FRM measures within World Bank flood project FAs is therefore to determine the mix of structural and non-structural measures, whether this proportion has changed over time, and whether certain FRM approaches appear more frequently. This framework forms the basis of our analysis, with additions made per critiques levied against the Bank. To complete the picture, we also add post-flood event recovery activities that represent reactive FRM, as opposed to the largely proactive measures enumerated within Figure 1. These additions are described further in Section 4.2 and Table 2.

3 | Engagement With World Bank Critiques

There is a connection between equitable FRM and economic and social programs (Ciullo et al. 2020; de Goër de Herve 2022; Mobini et al. 2020). As such, as a secondary premise, it is worthwhile to trace the evolution of FRM within Bank FAs alongside evolutions in the Bank's own economic and social standards.

There are four main critiques raised against the World Bank (Jones 2018; Owen et al. 2020; Peet 2009; Van Waeyenberge et al. 2015): human rights, engagement with dictatorial regimes, neoliberal economic policy, and gender equality. Each has a history of evolution and criticism within the Bank. This section describes these critiques and our engagement with them (or lack thereof) in this analysis.

Human rights activists have criticised the Bank for supporting the forcible relocation of people due to development projects (Hay et al. 2019; Owen et al. 2020; Thomas 2002), reporting issues of inadequate compensation, lack of consultation with affected communities, and failure to consider alternative project designs that might minimize displacement (van der Ploeg and Vanclay 2017). The issue of resettlement is particularly fraught in the context of FRM, as 'property purchase and relocation' is a valid method of FRM (Harries and Penning-Rowsell 2011; Parker 2007) (Figure 1). Scholars contend that resettlement policies for FRM must entail fully informed consent from and payment to resettled peoples in order to be equitable and just (Addo and Danso 2017; Rashid et al. 2007; Rey-Valette et al. 2019). The World Bank has had policies to guide resettlement toward more equitable outcomes since 2004 (World Bank 2004) and recently (2022) began requiring

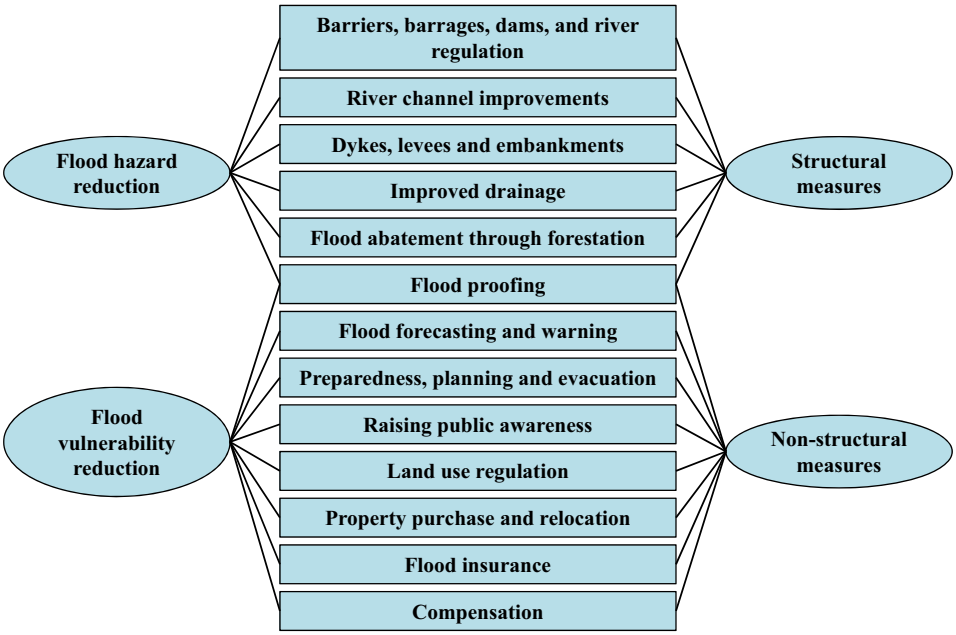

FIGURE 1 | A categorisation of flood risk management measures from Parker (2007) adapted into structural and non-structural groupings, reprinted from Harries and Penning-Rowsell (2011).

Stakeholder Engagement Plans as well. Thus, this critique might be best engaged by researching the history of resettlement policy in the Bank, which goes beyond the instrument of the FA used here.

The Bank is also criticized for its engagement with dictatorial regimes (Hanlon 2006; Toussaint 2024). While this critique is valid in some policy contexts, as it may help to legitimize such regimes (Schoner 2020), it is less relevant for the category of DRR and flood recovery. This is because recovery from environmental disasters should be promoted—and is a valid lending activity—regardless of the nature of the government of the country, as all peoples are deserving of humanitarian aid (Desportes 2020; Paik 2011). Thus, the political nature of the government receiving funds and questions of government corruption in the use of project resources are outside the scope of this analysis.

There is long-standing criticism of the World Bank for neoliberal economic policies, defined here as favouring the private sector and government downsizing regardless of local priorities or country-specific economic ideologies (Alvarez 2019; Güven 2012; Kentikelenis et al. 2016; Kovach and Fourmy 2006; Lio Rosvold 2020; Lloyd and Weissman 2002). In the water sector, the Bank was a main proponent of the 1990s privatization drive, requiring elements of privatization under its Integrated Water Resources Management framework in pursuit of increased efficiency (Rooney 2024; Ruiters and Smith 2005; World Bank 1993); however, this has been criticised for promoting profit over achieving universal, affordable water access in developing countries (Ahlers et al. 2013; Grafton et al. 2024; Marin 2009). Similarly, scholars within FRM question reliance on private sector solutions, with evidence that this leads to inequitable flood recovery outcomes (Kuhlicke et al. 2020; Oulahen 2015; Oulahen and Ventura 2023; Sharma 2021). Oulahen (2015) raises concerns over the proliferation of flood insurance in Canada, arguing that its propagation diminishes the government's FRM responsibilities. Kuhlicke et al. (2020) deem this the 'behavioural turn' of FRM which is shifting responsibility and costs for flood defences on to households to the detriment of systemic flood preparedness. Oulahen and Ventura (2023) also identify that privately funded FRM corresponds to land value, resulting in inequitable and incomplete coverage. Sharma (2021) finds that the Bank's Urban Resilience Project in Dhaka, Bangladesh, takes a neoliberal approach which emphasises the protection of economic assets to the detriment of the city's most marginalised peoples, increasing their vulnerability to flood risks. Given these critiques, this analysis includes parsing—where specified—whether compensation for FRM (Figure 1) targets the private or public sectors.

Finally, there are gendered disparities within flood risk preparation, impacts, and recovery (Denton 2002; Reyes and Lu 2016). Evidence demonstrates that women face disproportionate impacts from flood disasters (Cannon 2002), increased vulnerability to flooding, and high rates of violence throughout the disaster and recovery processes (Fisher 2010). Women may also have higher barriers to accessing FRM strategies such as early warnings due to lower literacy rates (Mathathu and Seedat-Khan 2022). As such, gender considerations are now recognized as necessary for equitable FRM. This is explicitly endorsed by the Bank (Erman et al. 2021; Kristof et al. 2020). Gender equality became a priority of the World Bank with its 2006–2010 Gender Action Plan (Jones 2018), with more meaningful coverage of gender-related DRR issues during the 2010–2020 decade (World Bank 2022). But the Bank has endured criticisms for having a narrow perspective on women's empowerment, namely by encouraging policies—such as reducing social safety nets—which disproportionately harm women (Berik 2017; Power 2020; Prügl 2017). The Bank's methods of analyzing gender equality are limited, with many of its projects not tracking this or outright failing to meet their own

criteria (Kenny and O'Donnell 2016). In this respect, studies of the Bank have found a disconnect between its rhetoric for progress on these issues compared to actual project outcomes (Güven 2012; Kentikelenis et al. 2016). Given the importance of gender equality for effective FRM, it is therefore useful to investigate the Bank's position by tracking how gender appears within its social programs for flood projects (Table 2).

4 | Methodology

Qualitative content analysis is a key tool for evaluating power relations, institutional transformation, and policy evolution (Klein et al. 2021). Our research used the qualitative data analysis software NVivo (QSR International Pty Ltd. 2012) to investigate and categorize changes in the World Bank's flood project Financial Agreements (FAs) over time. Here, FAs refer to the specific documents entitled either 'credit agreement', 'loan agreement', or 'financial agreement', all of which are funding contracts with similar structures and clauses, but differ in title due to past naming conventions and the lending instrument employed.

These FAs represent Investment Project Financing contracts which entail knowledge transfer and capacity building in addition to aid funds. FAs are primarily made up of contractual language regarding the conditions of payment, procedures for spending project money, valid uses of project money, and financing arrangements. These conditions are negotiated between the World Bank, the recipient country, and their respective legal teams. They show the influence on project design (as our analysis shows) by delineating the activities which constitute valid use of project money in terms of the FRM measures thereby supported.

FAs were chosen as the medium of analysis for two main reasons:

1. FAs represent a primary tool of the World Bank's power, for example, the provision and spending of funds and guiding courses of action, in this case for FRM. FAs enumerate appropriate actions and investments of project money—whereas other documents, such as Project Agreements, provide more context about the recipient country and flooding events, but less information about valid response activities.
2. The World Bank's documentation processes have changed over time; but FAs have remained relatively consistent and have the longest enduring paper trail.

FAs were identified for 52 projects from 1975 to 2023. They were closely read and coded in NVivo according to the framework in Table 2. Many FAs reference other documents, but these were excluded from our analysis, meaning that project parameters enumerated outside of FAs were not considered.

4.1 | Identifying Projects

The Bank's website includes a database that contains all projects and associated key details, chiefly: project country, name, project development objective (PDO), lending instrument, and approval date. These details were used to filter appropriate projects for analysis through the following five steps:

1. The spreadsheet of all World Bank projects was downloaded on December 27, 2023. Prior to filtering, the spreadsheet contained 22,293 total projects ranging from May 9, 1947, to December 21, 2023.
2. For ease of finding relevant cases, the title[1] of each project was filtered for whether it included the word 'flood', which also included iterations of the word (e.g., 'flooding'). This returned 112 results from 1950 to 2023.
3. These 112 projects were then filtered again by projects with the Last Stage Reached as 'Bank Approved', or left as an empty cell. Projects with the status 'Dropped' and 'Pipeline' were also excluded to result in the 98 projects which contained signed FAs.
4. Next, 'Grants' were filtered out of the Financing Types, as it was discovered that grant dispersal documents have a different form—and thus different and less consistent content—than FAs. This resulted in 85 projects.
5. Finally, manual filtering occurred by checking each project's webpage and documents. Projects without FAs or with broken URLs were excluded. Additional funding requests for existing projects were also excluded. This resulted in the final list of 52 projects from 1975 to 2023 shown in Table 1.

As shown in Table 1, several branches of the World Bank and a variety of lending instruments are considered within this analysis. These were self-defined by the World Bank in its database of all projects. Nonetheless, each project in this review shares the key document of a FA—by extension, this means that all projects under consideration include repayment terms and conditions. In other words, in addition to formally filtering out the 'Grant' funding type from our analysis, all projects reviewed were functionally loans rather than grants.

4.2 | Codes

The 52 projects were coded according to the framework for FRM adapted from Harries and Penning-Rowsell (2011).'Parent code' refers to broad categories and'child code' to sub-divisions therein: a parent code is the most general category (e.g., 'Non-Structural FRM') and child codes are more specific techniques within this category (e.g., 'flood insurance'). Given that content analysis is a flexible method that is responsive to the investigated material, code additions to this framework were made.

The first of these was the addition of a parent code for 'Aid Efforts', since post-disaster aid is a key component of Bank FAs. The techniques therein are seen as *reactive* FRM, which are not enumerated in Figure 1's generally *proactive* FRM strategies, but are nevertheless important. The child codes in this Aid Efforts category ('bank project implementation and administration', 'critical infrastructure repair', and 'relief efforts') were derived inductively from common terms within the FAs.

TABLE 1 | List of 52 World Bank projects analysed.

File name	Project status	Last stage reached name	Project name	Project cost	Financing type	Lending instrument
1975 Romania P008696	Closed	Not recorded	Flood Recovery Project	40,000,000	Not recorded	Emergency Recovery Loan
1976 Pakistan P010104	Closed	Not recorded	1976 Flood Damage Restoration Project	40,000,000	Not recorded	Emergency Recovery Loan
1982 Yemen P005870	Closed	Not recorded	Road Flood Reconstruction Project	7,000,000	Not recorded	Emergency Recovery Loan
1985 Bangladesh P009488	Closed	Not recorded	Flood Rehabilitation Project	30,000,000	Not recorded	Emergency Recovery Loan
1988 Brazil P006491	Closed	Not recorded	Rio Flood Reconstruction & Prevention Project	175,000,000	Not recorded	Emergency Recovery Loan
1988 Nepal P010309	Closed	Not recorded	Road Flood Rehabilitation Project	15,500,000	Not recorded	Emergency Recovery Loan
1989 Sudan P002640	Closed	Not recorded	Emergency Flood Reconstruction Project	75,000,000	Not recorded	Emergency Recovery Loan
1989 Yemen P005896	Closed	Not recorded	Emergency Flood Reconstruction Project	10,000,000	Not recorded	Emergency Recovery Loan
1990 Yemen P005808	Closed	Bank Approved	Taiz Flood Disaster Prevention & Municipal Development Project	28,800,000	Not recorded	Specific Investment Loan
1992 Iran P005213	Closed	Bank Approved	Sistan River Flood Works Rehabilitation Project	100,000,000	Not recorded	Specific Investment Loan
1992 Pakistan P010415	Closed	Bank Approved	1992 Flood Damage Restoration Project	397,200,000	Other	Emergency Recovery Loan
1993 China P003597	Closed	Bank Approved	Taihu Basin Flood Control Project	497,300,000	IDA	Specific Investment Loan
1996 Yemen P048522	Closed	Bank Approved	Emergency Flood Rehabilitation Project	35,000,000	Other	Emergency Recovery Loan
1997 Poland P053796	Closed	Bank Approved	Flood Emergency Project	498,200,000	IDA	Emergency Recovery Loan
1998 Bangladesh P063089	Closed	Bank Approved	Emergency Flood Recovery Project	200,000,000	IBRD	Emergency Recovery Loan
1998 Tajikistan P059055	Closed	Bank Approved	Emergency Flood Assistance Project	5,500,000	IDA	Emergency Recovery Loan
1998 Türkiye P058877	Closed	Bank Approved	Emergency Flood & Earthquake Recovery Project	685,000,000	IDA	Emergency Recovery Loan
1999 China P063123	Closed	Bank Approved	Yangtze Flood Emergency Rehabilitation Project	132,500,000	IDA	Emergency Recovery Loan
1999 Kyrgyz P062682	Closed	Bank Approved	Flood Emergency Project	14,100,000	Other	Emergency Recovery Loan
2000 Mozambique P070432	Closed	Bank Approved	Flood Emergency Recovery Project	30,000,000	IDA	Emergency Recovery Loan
2001 Cambodia P073394	Closed	Bank Approved	Cambodia: Flood Emergency Rehabilitation Project	40,400,000	Other	Emergency Recovery Loan

(Continues)

TABLE 1 | (Continued)

File name	Project status	Last stage reached name	Project name	Project cost	Financing type	Lending instrument
2001 Vietnam P042927	Closed	Bank Approved	Mekong Transport and Flood Protection Project	143,890,000	IDA	Specific Investment Loan
2004 Djibouti P089968	Closed	Bank Approved	Flood Emergency Rehabilitation	7,180,000	IDA	Emergency Recovery Loan
2006 Argentina P088220	Closed	Bank Approved	AR APL1 Urban Flood Prevention and Drainage	190,000,000	Other	Adaptable Program Loan
2007 Argentina P093491	Closed	Bank Approved	AR APL2 Urban Flood Prevention and Drainage	91,570,000	Other	Adaptable Program Loan
2007 Kenya P074106	Closed	Bank Approved	Western Kenya CDD and Flood Mitigation Project	100,000,000	Other	Specific Investment Loan
2007 Poland P086768	Closed	Bank Approved	Odra River Basin Flood Protection Project	489,000,000	Other	Investment Project Financing
2009 China P101829	Closed	Bank Approved	Xining Flood and Watershed Management	188,000,000	Other	Specific Investment Loan
2010 China P098078	Closed	Bank Approved	Huai River Basin Flood Management and Drainage Improvement	597,410,000	Other	Specific Investment Loan
2011 Colombia P111479	Closed	Bank Approved	CO Rio Bogota Environmental Recuperation and Flood Control Project	487,000,000	Other	Investment Project Financing
2011 India P122096	Closed	Bank Approved	Bihar Kosi Flood Recovery Project	259,000,000	IDA	Investment Project Financing
2011 Pakistan P125105	Closed	Bank Approved	Pakistan Flood Emergency Cash Transfer Project	580,000,000	IDA	Emergency Recovery Loan
2012 Indonesia P111034	Closed	Bank Approved	Jakarta Urgent Flood Mitigation Project	189,850,000	Other	Investment Project Financing
2013 Cameroon P143940	Closed	Bank Approved	Flood Emergency Project	108,000,000	IDA	Investment Project Financing
2013 China P128867	Closed	Bank Approved	Jiangxi Wuxikou Integrated Flood Management Project	513,720,000	Other	Investment Project Financing
2014 Bosnia P143844	Closed	Bank Approved	Drina Flood Protection Project	28,270,000	IDA	Investment Project Financing
2014 Bosnia P151157	Closed	Bank Approved	BiH Floods Emergency Recovery Project	100,000,000	IBRD	Investment Project Financing
2014 Guyana P147250	Active	Bank Approved	GY Flood Risk Management	11,890,000	IDA	Investment Project Financing
2014 Nigeria P130840	Active	Bank Approved	Ibadan Urban Flood Management Project	220,000,000	IDA	Investment Project Financing
2014 Serbia P152018	Closed	Bank Approved	Floods Emergency Recovery Project	300,000,000	Other	Investment Project Financing
2015 Malawi P154803	Closed	Bank Approved	Malawi Floods Emergency Recovery	80,000,000	Other	Investment Project Financing

(Continues)

TABLE 1 | (Continued)

File name	Project status	Last stage reached name	Project name	Project cost	Financing type	Lending instrument
2016 Argentina P145686	Closed	Bank Approved	AR Flood Risk Management Support Project for the City of Buenos Aires	326,000,000	IDA	Investment Project Financing
2016 India P154990	Active	Bank Approved	Jhelum and Tawi Flood Recovery Project	250,000,000	Other	Investment Project Financing
2016 Myanmar P158194	Closed	Bank Approved	Myanmar Flood and Landslide Emergency Recovery Project	200,000,000	Other	Investment Project Financing
2017 Philippines P153814	Active	Bank Approved	Metro Manila Flood Management Project	500,000,000	IDA	Investment Project Financing
2017 Vietnam P152460	Active	Bank Approved	Vinh Phuc Flood Risk and Water Management Project	220,000,000	IBRD	Investment Project Financing
2020 India P162679	Active	Bank Approved	West Bengal Major Irrigation and Flood Management Project	413,800,000	IDA	Investment Project Financing
2022 Ethiopia P176327	Active	Bank Approved	Ethiopia Flood Management Project	300,000,000	IDA	Investment Project Financing
2022 Pakistan P179981	Active	Bank Approved	Sindh Flood Emergency Rehabilitation Project	510,000,000	Other	Investment Project Financing
2022 Türkiye P176608	Active	Bank Approved	Türkiye Earthquake, Floods and Wildfires Emergency Reconstruction Project	449,250,000	IBRD	Investment Project Financing
2023 Argentina P178534	Active	Bank Approved	Climate Resilient Infrastructure for Urban Flood Risk Management Project	200,000,000	Not recorded	Investment Project Financing
2023 Pakistan P180323	Active	Bank Approved	Integrated Flood Resilience and Adaptation Project	213,000,000	IBRD	Investment Project Financing

TABLE 2 | Coding framework Adapted from Parker (2007) and Harries and Penning-Rowsell (2011), with additions in italics. Definitions are original.

Parent code	Child code 1	Child code 2	Brief description
Aid Efforts			*The provision of emergency aid to the project recipient.*
	Bank project implementation and administration		*Contractual language about implementation, administrative, and capacity-building support provided by the Bank to the project recipient. Has a potential impact on FRM implementation but is also standard contractual language and therefore different from Non-Structural FRM.*
	Critical infrastructure repair		*Repair of critical infrastructure and services (roads, electricity, schools, healthcare, etc.) but not FRM structures.*
	Relief efforts		*Restoration of food supplies and other relief actions.*
	Social programs - other		*Social programs not enumerated within the FRM framework, e.g., community-led development, health programs, and gender-specific measures.*
Non-Structural FRM Measures			Institutional, informational, and regulatory FRM activities.
	Compensation		Payments made to recover from flood losses.
		Industrial, Sectoral	*Compensation and economic programs targeting industry or specific economic sectors.*
		Residential, Individual	*Compensation and economic programs targeting individuals or homeowners.*
	Flood forecasting and warning		Improving or establishing meteorological data-gathering facilities and warning capacity.
	Flood insurance		Compensation schemes paid out by insurance companies.
	Land use regulation		Land use planning, building codes, and land use regulatory activities.
	Preparedness, planning, and evacuation		Establishing plans, undertaking studies, improving preparedness via both activities and materials/equipment, improving evacuation procedures and routes.
	Property purchase and [resettlement]		Moving buildings and/or people out of flood-prone areas. Changed from "relocation" to "resettlement" as the latter is more widely used by the Bank.
	Raising public awareness		Public education activities related to flood preparedness.
Structural FRM Measures			Physical infrastructure FRM interventions.
	Barriers, barrages, dams, and river regulation		Structures to regulate, redirect, and/or capture floodwaters.
	Dykes, levees, and embankments		Structures to prevent river overflow.

(Continues)

TABLE 2 | (Continued)

Parent code	Child code 1	Child code 2	Brief description
	Flood proofing		Temporary FRM measures primarily targeting specific sites e.g., sandbags or boarding windows.
	Improved drainage		Improving, repairing, or un-blocking drainage infrastructure.
	Reforestation		Adding trees or other plants to the landscape to absorb floodwaters and prevent erosion. Includes Nature-Based Solutions as relevant.
	River channel improvements		Primarily widening, deepening, or dredging river channels.
Unique Conditions			*Project-specific conditions within World Bank FAs which are not encompassed by these other codes.*

The second addition was that of child codes which account for the criticisms levied against the Bank, in order to capture further nuances than are represented in the FRM framework of Harries and Penning-Rowsell (2011) (Figure 1). These additions, derived inductively from the critical literature against the Bank, are 'Social programs—other' to account for gender-related programmes and capture additional distinctive programmes, and 'industrial, sectoral' and 'residential, individual' under 'compensation' to record recipients of economic aid. These additions are highlighted in *italics* within Table 2.

The brief descriptions provided in Table 2, in addition to giving definitions, succinctly indicate how these codes were operationalised when reviewing FAs. Parent codes were employed when the information was too general to be ascribed to a child code. For example, much FA text was coded to the parent codes for 'Structural FRM' and 'Non-Structural FRM', as there was commonly language in the relevant FA that was too generic or brief to be ascribed solely to a specific child code.

4.3 | Limitations

There is much to learn from World Bank flood project FAs as a representation of power and in shaping global FRM practices. However, the methods described here create specific results that should not be misinterpreted.

The results only speak to the *inception* of the FRM project—the parameters in which the project can operate—but do not speak to project *implementation* nor project *results*. These two are not presented consistently across the six decades we investigated, making sensible comparison impossible, and the Bank itself finds that it is not easy to assess the impacts of its DRR efforts (World Bank 2022, p. xi). These would need to be discerned from other methods and/or documents. Further, as mentioned, additional documents which set out project parameters were not analysed, thus this analysis also does not account for every condition at project inception. This is due to both project scope and data availability—for example, past iterations of the World Bank's General Conditions are unavailable and other documents, now described as mandatory per the FA (such as Environmental and Social Commitment Plans), were introduced as recently as 2022. Only the FAs were found to be the most consistent and historically available documents for World Bank flood projects.

It is also important to note that each project is individualised, situational, and context dependent. While the benefit of this research is to reveal trends over time and the presence/absence of FRM measures across projects, this cannot on its own be extrapolated into critiques of particular projects ('FRM measure X should have been used here', for example), as FAs do not provide enough context or detail for such critiques.

5 | Results

The following figures summarise the results from coding the 52 World Bank flood project FAs from 1975 to 2023. Project titles are simplified into year,[2] country, and project identification number.

There are two principal ways to analyse coded content in NVivo: (1) the number of occurrences or (2) the percentage of content coded within the overall text. The latter was used in this analysis, as much coded text entailed several sentences of description, which were all considered one instance of the code. Most coded text was in the 'Project Description' part of an FA, and overall, a very small percentage of text was coded, as most of an FA is standard contract language that rarely changes between projects. This contributes to the low percentages of codes found throughout the results (and hence the y-axis scales of the graphs).

A non-FRM code was added, the parent code 'Unique conditions', in order to account for any notable legal conditions in these 52 FRM projects. Only five projects had these unique, additional conditionality clauses. These pertain to: two clauses with prohibitions on project-related resettlements ('2006 Argentina P088220 2006' and '2017 Vietnam P152460 2017'), one instructing the cash grants program ('2011 Pakistan P125105' 2011), one to protect a particular mine ('2014 Serbia P152018' 2014), and

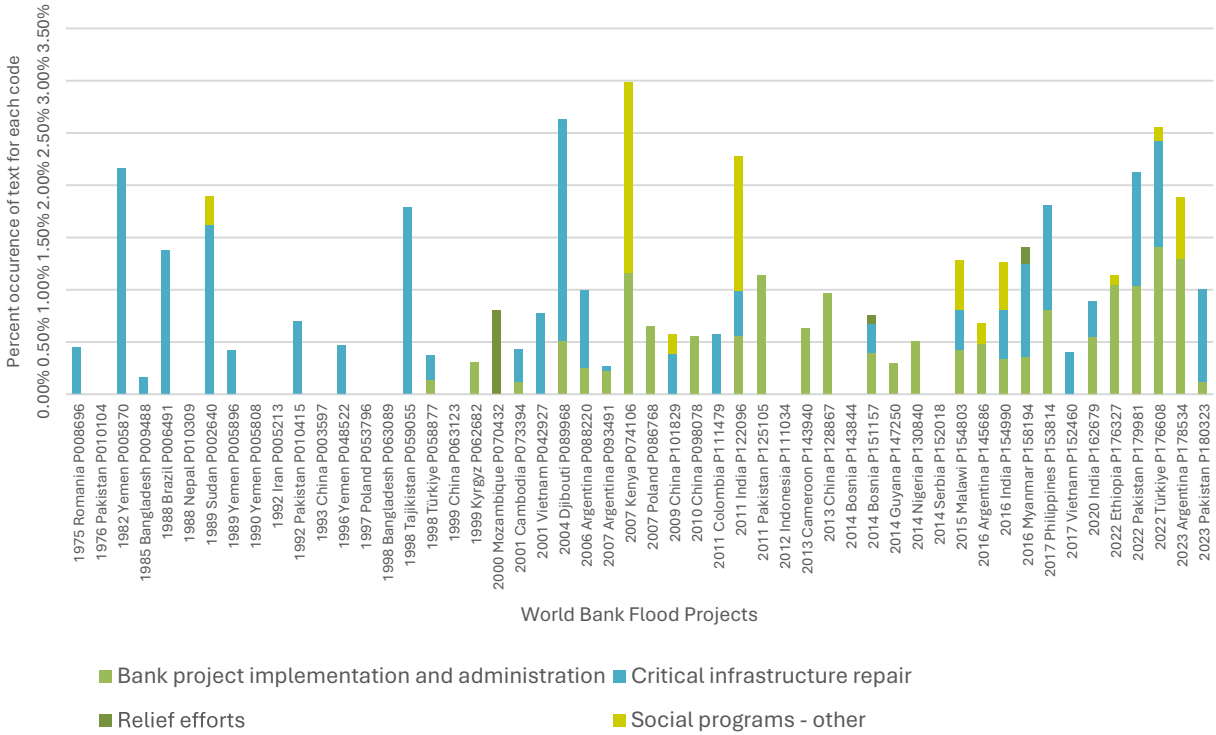

FIGURE 2 | Percent coverage of all aid efforts codes.

one with extensive detail about proper disposal of the hazardous waste that would result from the project's proposed dredging activities ('2012 Indonesia P111034' 2012). Otherwise, the conditions within each FA were essentially the same between projects, with some variation over decades as the Bank ostensibly altered its standard contractual language. That there were few instances of this 'Unique conditions' code demonstrates that conditionality is remarkably consistent across FAs for FRM projects.

5.1 | Aid Efforts as Reactive FRM Measures

The most prevalent code within Aid Efforts was 'critical infrastructure repair' (28 projects) followed by 'bank project implementation and administration' (27 projects) then 'social programs—other' (10 projects) and 'relief efforts' (3 projects). Figure 2 shows the percent coverage of each code within the documents and indicates that Aid Efforts become more varied over time. Figure 2 also indicates that, beginning in 2004, it becomes more common for multiple aid strategies to be deployed, whereas prior to that it is very common to focus only on 'critical infrastructure repair'.

'Bank project implementation and administration', despite being very prevalent, does not emerge until 1998. Much of this is standard contractual language that emerged for the Bank to dedicate support for project implementation, although it sometimes goes beyond that to describe specific steps to support institutional capacity for FRM within the recipient country, naming specific institutions and associated measures to bolster their capabilities. This reflects a turn toward increasing institutional capacity as a valid lending activity over time, when it was not a focus in earlier projects.

Of the 10 projects that were coded for 'social programs—other' the topical breakdown was as follows: health (1), community-driven development (2), livelihood restoration and enhancement (3), considerations for low-income neighbourhoods and informal settlements (1), and gender (4). The four clauses related to gender involved promoting the equitable distribution of FRM benefits ('2007 Kenya P074106' 2007), preparing FRM plans that are gender-sensitive ('2022 Ethiopia P176327' 2022 and '2023 Argentina P178534' 2023), and improving economic inclusion ('2022 Türkiye P176608' 2022).

5.2 | Structural FRM vs. Non-Structural FRM (In Aggregate)

Figure 3 is an area chart which shows the aggregate of all Structural and Non-Structural FRM codes: the sum of text coded to the parent items and the aggregation of their child codes. This area chart acts as a combination bar and line graph to show the change in quantities over time and demonstrate how Structural vs. Non-Structural FRM Measures compare within each project. For example, Structural dominated in '1985 Bangladesh P009488 1985' Non-Structural dominated in '2022 Ethiopia P176327' 2022, and the measures were represented roughly equally within '2007 Kenya P07106' 2007.

This shows that both Structural and Non-Structural FRM Measures are used for nearly the entirety of the study period. Structural FRM first appears in 1976, and Non-Structural FRM first appears in 1988—a significant temporal gap, but a difference of only three projects examined. The two approaches are also prevalent in nearly the same number of projects, with Structural FRM used in 43 projects and Non-Structural FRM used in 44 projects. However, as shown in Figure 3, the amount of coded text was larger for Non-Structural FRM (0.60%) than for Structural FRM (0.34%), with a notable shift from Structural toward Non-Structural beginning in 2000.

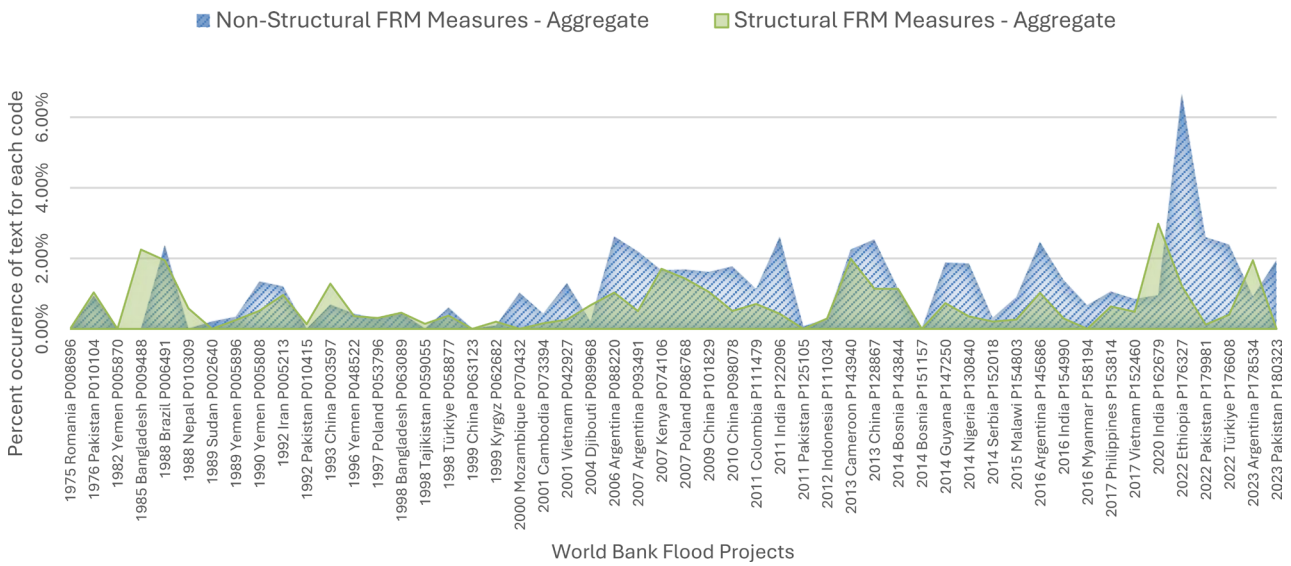

FIGURE 3 | Aggregate percent coverage of structural versus non-structural FRM measures.

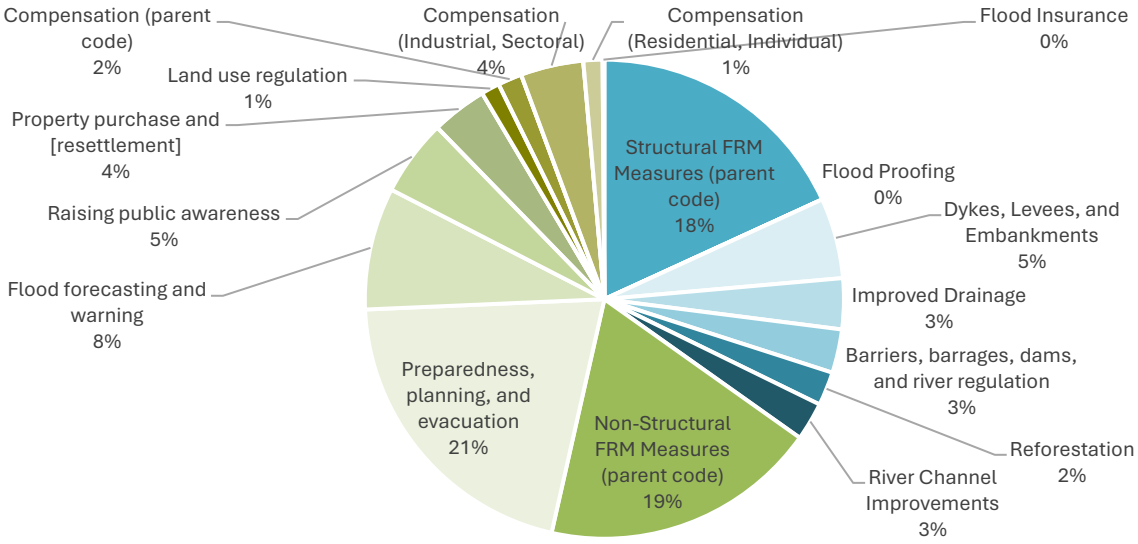

FIGURE 4 | Total percentage of FRM measures from Figure 1 over time, with Structural in shades of blue and Non-Structural in shades of green.

Figure 4 shows the total percentage of all the FRM measures from Figure 1 over time—the sum of each code's coverage throughout all 52 projects. This demonstrates that the most popular FRM measure was 'preparedness, planning, and evacuation' with specific instances of other FRM measures trailing behind at less than 10%. Generic descriptions about both Structural and Non-Structural FRM Measures appear with nearly the same frequency, at 18% and 19%, respectively. It also shows that there were no instances of 'flood insurance' nor 'flood proofing' within the FAs.

5.3 | Structural FRM Measures

Codes for parent Structural FRM Measures were numerous, appearing in 29 projects. Of the child codes, 'dykes, levees, and embankments' and 'improved drainage' were most prevalent, in 14 and 12 projects, respectively. Figure 5 shows the percent coverage of each code within the documents and indicates that there was the most variation in Non-Structural FRM Measures from roughly 2004 to 2012, although this is not a strong trend. Temporally, all specific Structural FRM Measures—the child codes—are sporadically dispersed over the whole study period. No project uses every Structural measure.

5.4 | Non-Structural FRM Measures

Codes for parent non-structural FRM Measures were the most prevalent, appearing in 30 projects. Of the child codes, 'preparedness, planning, and evacuation' and 'flood forecasting and warning' were the most prevalent, in 25 and 21 projects, respectively. Figure 6 shows the percent coverage of each code within the documents and indicates that Non-Structural FRM Measures become more varied from 2001, continuing to the

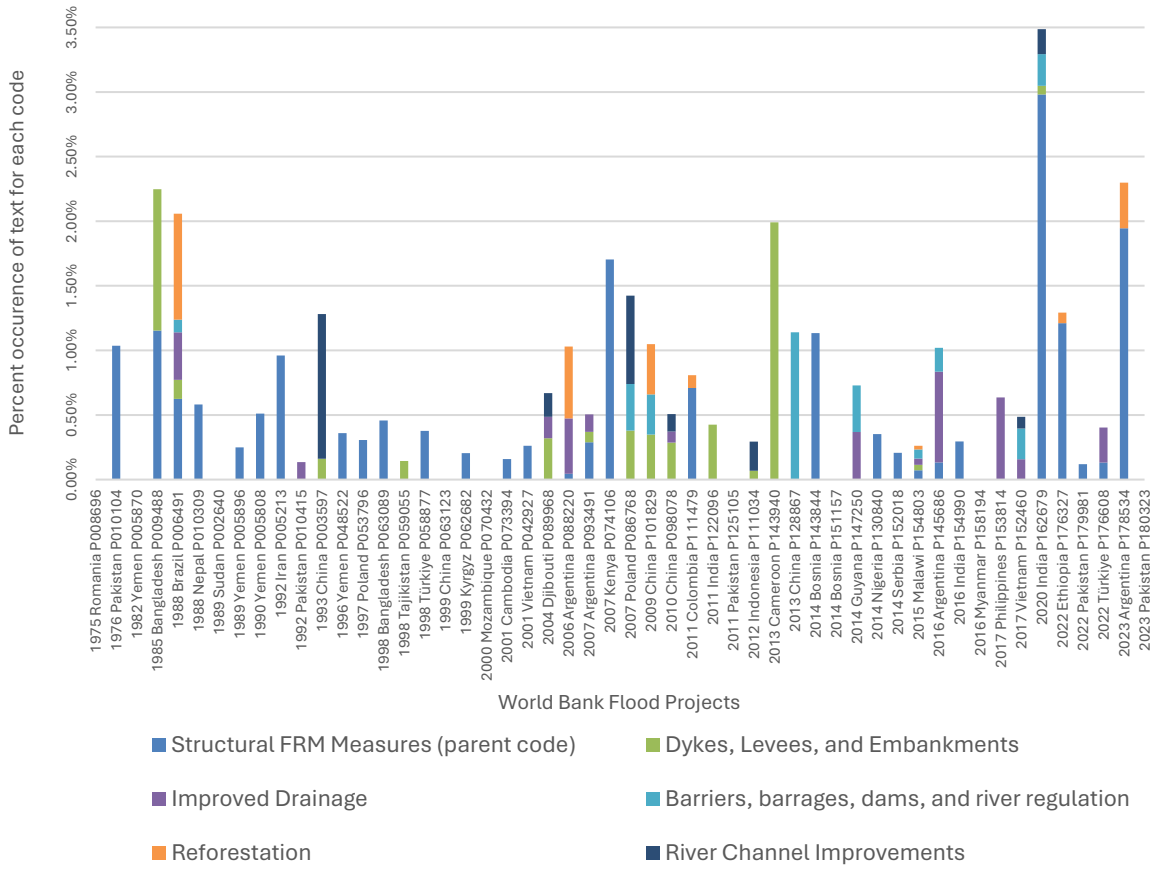

FIGURE 5 | Percent coverage of structural FRM codes.

present day. 'Land use regulation' is sporadically employed, first appearing in 2001. 'Raising public awareness' does not appear until 2006. Otherwise, each Non-Structural FRM Measure is sporadically distributed across time. No project uses every Non-Structural FRM Measure (Figure 6).

Two codes were attributed to 'compensation' rather than its child codes, as these described the schemes in too general of terms. There are only a total of 11 specific compensation schemes within the project FAs. Of the coded text, eight target the private sector ('compensation—industrial, sectoral') and three target individuals ('compensation—residential, individual'). In addition to prevalence, 'compensation—industrial, sectoral' comprises 0.04% of all coded text, and 'compensation—residential, individual' comprises just 0.01% of all coded text. Furthermore, 'compensation—industrial, sectoral' begins with the first project examined, in 1975, whereas 'compensation—residential, individual' does not occur until 2011.

6 | Five Projects Illustrating Trends

Whilst the general trends discussed above are clear, greater granularity exposes the detail behind the overall patterns. This is best illustrated by examples, and five of the 52 FAs are briefly summarised below. These were deliberately chosen to illustrate the shift outlined above from a primarily structural to an integrated FRM paradigm.

6.1 | '1976 Pakistan P010104'

An early project in Pakistan ('1976 Pakistan P010104 1976') had a strong engineering-related component and little else (Figure 5). This project entailed major contractors to be hired for the large-scale restoration of irrigation and drainage systems and flood protection works, implying an absence of maintenance over many years. The completion of a study reviewing the existing operation and maintenance procedures for flood protection and drainage facilities in each of the provinces was required to precede such work. Improvements here were seen as necessary. The project also involved a study for the development of the civil works contracting industry in Pakistan, perhaps representing an emphasis on promoting the private sector. A significant development, however, was for the preparation of a flood protection plan and associated action programme—the foundations for non-structural FRM measures.

6.2 | '1988 Brazil P006491'

By 1988, a project for Brazil ('1988 Brazil P006491' 1988) had already included some integrating elements (Figure 3). The reconstruction and rehabilitation of basic infrastructure in the project area damaged by floods was given top priority, with much of the resources devoted to repairing damage. Nevertheless, it also included a programme for the resettlement of about 16,000 people living in the flood affected areas, and a social dimension in the form of the rehabilitation and repair of 37 schools. Technical

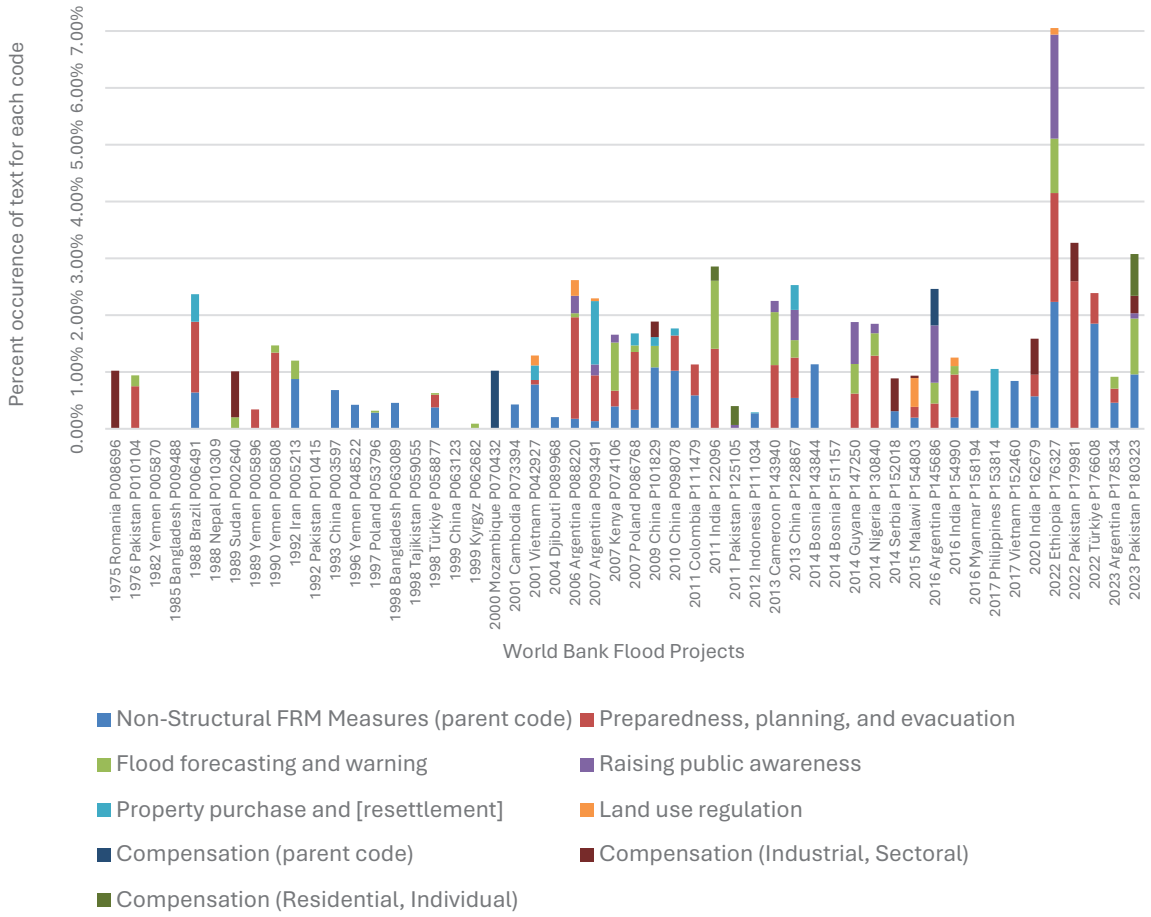

FIGURE 6 | Percent coverage of non-structural FRM codes.

assistance was also provided for preparing a 'civil defence plan' for the Metropolitan Area of Rio de Janeiro. This plan was to address arrangements to prevent or mitigate the adverse effects of future human disasters, and promote institutional preparedness and coordination for such emergencies. Another element included a small reforestation programme comprising of 1200 ha, and an evaluation of the State Secretary of the Environment's technical and institutional capacity to execute a medium- and long-term reforestation plan for Rio de Janeiro, including an analysis of potential land tenure issues.

6.3 | '2011 India P122096'

Some two decades later, a project for India ('2011 India P122096' 2011) involved a more complex and varied specification (Figures 2 and 6). This project focused on the Khosi river flowing from the Himalayas on to the Gangetic plain and its chronic and damaging flood record. An engineering component was important to include the strengthening of sections of 8 km of embankments using more adaptable materials and construction techniques, and fixing damage lasting from a breach in a 2008 flood. Also included was the construction of about 90 bridges and culverts on the state highway and major district roads, and the rehabilitation of about 290 km of rural roads. Finally, there was to be a pilot project for river erosion and sediment control structures.

Non-structural components were a complementary component of this project. Thus, it also included the strengthening of flood forecasting systems, including gathering digital elevation data on the Khosi River Basin to enable the preparation of hazard and risk maps. This was to be the basis of setting up a forecasting and warning system and the related institutional developments for its operation. An important element was the development of flood warning and emergency management capacity.

Representing a notable divergence from previous thinking, this project entailed provisions for livelihood restoration and enhancement. This was to involve restoring and expanding the livelihood opportunities of the flood-affected population through a number of initiatives including training, advisory services, and the management of a community investment fund. That fund was to include provision of payments to beneficiaries for carrying out income generation and skills development activities, together with food security and health-related interventions.

6.4 | '2022 Ethiopia P176327'

Two projects in Ethiopia and Argentina presumably reflect the most up-to-date thinking for the Bank. In Ethiopia in 2022, the objective of the multi-dimensional project (Figures 5 and 6) was to strengthen the country's institutional capacity for disaster risk

management generally and flood risk management in particular in selected basins ('2022 Ethiopia P176327' 2022). This involved strengthening institutional coordination capacity, at federal and regional levels, and strengthening emergency preparedness and response, for example through deploying better equipment for search and rescue operations. Raising awareness with training included a gender-sensitive disaster risk awareness and communication strategy. An accelerated flood risk management programme was designed to implement basin-level physical flood reduction measures, including embankments, riverbed and bank protection, river excavation and widening. The project aimed to strengthen priority hydrometric services and the development and operationalization of impact-based flood early warning systems for high-risk locations. Also involved was strengthening community level links for preparedness, and raising awareness in high-risk areas including undertaking baseline surveys for future risk monitoring as investment proceeded. This involved the preparation of feasibility studies and some detailed design work, together with studies of flood risk in major cities. Fundamental to this project was strengthening the operational and technical capacities of committees at the federal and basin level for implementation, coordination, supervision and overall management of the Bank-financed project.

6.5 | '2023 Argentina P178534'

Coming even more up to date, a project in Argentina in 2023 was even more multifaceted and complex (Figures 5 and 6), now providing support to the borrowing country and its FRM institutions and tasks rather than the Bank decreeing what should be done ('2023 Argentina P178534' 2023). Fundamental to this project was developing an urban flood risk management plan and strategy, including environmental assessments, urban development, and solid waste management. Promoting evidence-based flood risk mitigation measures involved the rehabilitation, upgrading, and reconstruction of a new hydraulic infrastructure for urban drainage and flood risk management, including the provision for resettlement costs.

More ambitious, however, were innovative, integral, and multipurpose flood risk mitigation interventions, including the design and development of 'green-blue infrastructure,' with retention areas, linear parks, green roofs, and permeable pavements. Urban green corridors and recreation areas were to be designed. At the same time, early warning systems and tools to operate and maintain infrastructure and improve urban flood risk management were to be developed. Reviewing legal frameworks, providing training, and developing tools to guide the involvement of project stakeholders were to use a holistic basin approach. Indeed, the aim was to support the implementation of participatory and interactive design processes with key stakeholders, in coordination with the Ministry of Economy as being those responsible for technical and methodological advice.

7 | Discussion

Overall, very few Unique Conditions were employed within the FAs (only five projects), indicating that it is primarily the FRM project parameters that differ rather than conditionality for the disbursement of funds or repayment. The project descriptions within FAs revealed much about the Bank's approach to FRM and how flood projects fare against common critiques of the Bank, further discussed below.

7.1 | Trends in World Bank FRM

The evidence indicates that the Bank has relied on varied measures for FRM over time. One principal finding from this analysis is that the Bank may have been a leader in integrating Non-Structural with Structural FRM Measures. The five examples summarised above show the shift from Structural to Non-Structural FRM Measures, with '1976 Pakistan P010104 1976' focusing on structural aspects but introducing a key non-structural measure of the flood protection plan, and '1988 Brazil P006491 1988' being the first project where non-structural measures overtake structural measures (Figure 3).

Several researchers note the emergence of integrated FRM measures in the early 2000s: after 2003 according to Wang et al. (2022), and around 2005 for the UK government (Harries and Penning-Rowsell 2011). There were several major flood projects in the EU and UK that were explicitly interdisciplinary: Making Space for Water (2001), Foresight Flooding (2003–2005), Floodsite (2004–2009), and Room for the River (2006–2015) (Defra 2004; DEFRA 2005; European Commission 2000, 2007; Floodsite 2004; Rijke et al. 2012). These integrated projects were branded as such and came about due to the destructive transnational flooding of the Rhine in the 1990s, River Odra in 1997, and Elbe in 2002, as well as a complicated form of exemption for FRM measures in the EU's Water Framework Directive of 2000. The Floods Directive would only come in 2007 (Grigg 2024; Samuels 2009). So, while the impetus for integrated flood projects arose in the EU in the 1990s, it did not reach implementation until the early 2000s or later. Globally, the World Meteorological Organization and Global Water Partnership founded The Associated Programme on Flood Management to promote integrated FRM projects around the same time, in 2001 (WMO 2022). Our results find that the Bank started using an integrated approach as long ago as 1976 (Figure 3). Further, as early as 1988, Non-Structural Measures were more prevalent in FAs than Structural Measures. Thus, the trend seems clear that the World Bank was a policy leader in integrating Structural and Non-Structural Measures into its flood projects before many other countries and, indeed, before transnational bodies and their programmes.

However, this lead is not spread evenly across Non-Structural Measures. Of note is that 'raising public awareness' did not emerge in the Bank's FAs until 2006. Similarly, the Bank has only recently (2022) started to require Stakeholder Engagement Plans for projects, with provisions within FAs reinforcing the need to follow these plans. Virtually none of the 'property purchase and [resettlement]' codes entailed property purchase. This is perhaps related also to the relative lack of 'land use regulation' codes, as both FRM measures imply overdevelopment on floodplains. Further research would be fruitful to determine the equity implications of these FRM measures as enacted in World Bank flood projects.

No single FRM measure emerges as particularly favoured by the Bank, with the exception of 'preparedness, planning, and

evacuation.' It was both the most often employed Non-Structural FRM Measure (i.e., the most frequent) and it is the single FRM measure with the highest percent coverage across all projects (i.e., the most in-depth). This is notable because other FRM measures have similar frequency of use ('flood forecasting and warning' is discussed 21 times), but none come close as to depth. The project '2022 Pakistan P179981 2022' represents a bit of an outlier, with 2.60% coverage while the next highest project is '2022 Ethiopia P176327' 2022 with 1.92% coverage, but nonetheless 'preparedness, planning, and evacuation' also has the highest average coverage of all FRM measures. If the Bank has a favoured FRM strategy, it may be this, perhaps due to the diversity of activities this category entails as well as its connections to capacity building—which is also a prevalent theme of the Bank's Aid Efforts, as shown in Figure 2.

7.2 | Critique 1: Neoliberal Compensation Policies

Compensation schemes are sparse within the Bank FAs for flood projects, appearing for only 11 projects. Those that are described do favour industry and the private sector. '1975 Romania P008696 1975' provides aid to the mining industry to replace equipment damaged by the flood; '1989 Sudan P002640 1989' provides aid to the agricultural sector, again for equipment but also for cash loans to farmers; '2009 China P101829 2009' also aids the agricultural sector with loans for animal husbandry and investment in renewable energy; '2014 Serbia P152018 2014' aids the energy, mining, and agricultural sectors; '2015 Malawi P154803' 2015 provides monies for farm vouchers; '2020 India P162679' 2020 provides money to incentivize crop diversification and water conservation among farmers; '2022 Pakistan P179981' 2022 also provides agricultural incentives and cash-for-work monies; and '2023 Pakistan P180323 2023' makes money available for watershed restoration in agricultural communities. As such, it seems that agriculture is a favoured sector for Bank flood Aid Efforts.

From these examples, it seems that over time the Bank is also moving away from wholescale industrial support, such as replacing equipment at a specific mine in 1975, to more holistic and community-based economic support from 2020 onwards, wherein there is a shift in language from particularly 'agriculture' as a sector to reference of 'agricultural communities' instead. Furthermore, the appearance of 'compensation—residential, individual' is similarly recent, in 2011 and 2023, where a valid use of aid money is in owner-driven housing reconstruction ('2011 India P122096 2011' and '2023 Pakistan P180323 2023') and direct cash grants to flood-affected households ('2011 Pakistan P125105' 2011). As described for '2011 India P122096 2011', this project entailed a notable change toward livelihood restoration and enhancement after the flood, entailing holistic community support in addition to housing reconstruction. One might wonder whether there were policies against direct compensation to individuals before this time; but no such condition was found within FAs.

Additionally, the lack of 'flood insurance' and 'flood proofing' is interesting in regard to the neoliberal critique, as both are FRM measures that emphasise the role of the private sector, which would be in line with the Bank's tendency in other subject areas to favour private sector solutions (Lloyd and Weissman 2002; Oulahen and Ventura 2023). In all, although cases of 'compensation' are generally sparse across projects, the trends demonstrate that the Bank is perhaps becoming more community-oriented, even when it provides aid money to the private sector. Thus, although the early evidence for projects in the 1970s to 1990s was in line with the neoliberal critique, the evolution of projects over time, and in particular, more recent projects, stands in contrast to that critique.

7.3 | Critique 2: Gender Equality

Evidence is similarly sparse for gender equality prescriptions in the FAs, as only four cases relate to gender, and all in differing ways. These entail '2007 Kenya P074106 2007', where local development aid that is 'beneficial to several communities' includes specific targets for women and girls; '2022 Ethiopia P176327 2022' to update its disaster risk management guidelines according to gender mainstreaming; '2022 Türkiye P176608 2022' to use aid in ways that contribute to gender parity in employment as a sub-goal; and '2023 Argentina P178534 2023' to 'developing strategies, assessments, and tools to enhance a gender inclusive water governance approach' (4). A primary finding from this analysis, despite the lack of cases, is therefore that there is no mention of gender equality until 2007, after the creation of the Bank's 2006–2010 Gender Action Plan (Jones 2018), despite scholarly emergence of the connection between flooding and gender as early as 2002 (e.g., Cannon 2002; Denton 2002).

These four examples also show that the Bank is not approaching gender consistently within FAs for FRM when it is included at all. As illustrated in our five examples, above, the project '2022 Ethiopia P176327 2022' requires a gender-sensitive disaster risk awareness and communication strategy, and '2023 Argentina P178534 2023' includes a goal for 'a gender inclusive water governance approach', but neither FA explains what exactly is meant by these objectives. The absence of gender-related flood provisions within FAs, even since the Bank's Gender Action Plan, echoes the critique that the Bank's rhetoric does not always match its work and vice versa (Güven 2012; Jones 2018). Although the Bank now requires Environmental and Social Commitment Plans, which presumably contain more parameters to promote gender equality within projects, there does seem to be a disconnect since these are not enumerated within FAs. As such, our evidence shows that the Bank has not been using its full power within its lending agreements to purposefully pursue its gender equality goals.

8 | Conclusions

The World Bank dedicates much funding and expertise to flood risk management projects (FRM). As such, and due to its power as a global lending institution, it wields considerable influence in potentially prescribing policy preferences within flood projects for recipient countries via their Financial Agreements (FAs). This paper has used qualitative content analysis in 52 World Bank flood project FAs to determine trends in its FRM positioning over six decades, and to seek evidence to support or not support pre-existing economic and social critiques of the Bank.

So, what does this analysis contribute to our understanding of the Bank's changing role and its wider context? First, we found that the Bank in its investment programme has become more progressive and modern over the last six decades. For example, it has deployed both Structural and Non-Structural FRM strategies across the bulk of its projects, and in this respect the Bank's most prevalent FRM measure in both frequency and detail was 'preparedness, planning, and evacuation'. However, it employs specific FRM measures somewhat sporadically across projects, and some measures—like 'raising public awareness'—trail the general FRM trend elsewhere. The five projects taken as exemplars here show a shift in the Bank, not only from solely structural FRM to a broader policy mix, but also a move towards community empowerment in economic strategies, and a general leeway for the recipient country to largely decide itself the best courses of action. Our multi-decade analysis is supported by the similar trend seen recently in the Bank's own evaluation of DRR projects (World Bank 2022).

Secondly, the Bank's track record on favouring the private sector does seem to be changing over time, with increasing focus on community restoration in its economics formulae. Its inclusion of provisions related to gender engagement are very recent, suggesting some progress here; however, both these provisions are varying and ill-defined, and its provisions concerning gender equality are particularly sparse and inconsistent. Thus, we conclude that criticisms levied against the Bank related to neoliberal policies and gender equality are not entirely unfounded but are less pertinent in recent times.

In contrast, thirdly and more importantly, in the confines of flood project FAs, the Bank has clearly used its power to promote the innovative adoption of integrated FRM strategies, using a portfolio of complementary measures in a creative mix of interventions. We judge this to be a strength of its evolving prescriptions, and one developed much sooner than might be expected according to key FRM literatures where such an approach was mainstreamed elsewhere only decades later. This has helped make the Bank a policy leader for integrated FRM strategies, and it deserves much credit for its positioning here. Our analysis also illuminates FRM as a specific field in which the Bank has indeed clearly evolved as a Knowledge Bank through the implementation of innovative modes of development (World Bank 2024). However, we are not unaware of the limitations of an analysis of just the Bank's FA's prescriptions, revealing though this is. Further research should seek to examine our conclusions against the experiences of recipient countries in the implementation and impact of the FRM schemes that the Bank has supported; this being the ultimate test of its aspirations and contribution.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Endnotes

[1] Filtering for "flood" within the PDO was also tried, returning 179 results. This method was not pursued because it returned results where FRM was a noted project benefit rather than the primary goal. Furthermore, this method only captured results after the year 2000.

[2] There is some discrepancy between the "Bank Approval Date" and the date on which the FA was signed. Titles here use the FA date. The project ID should further clarify any discrepancy in naming conventions.

References

Addo, I. Y., and S. Y. Danso. 2017. "Sociocultural Factors and Perceptions Associated With Voluntary and Permanent Relocation of Flood Victims: A Case Study of Sekondi-Takoradi Metropolis in Ghana." *Jàmbá: Journal of Disaster Risk Studies* 9, no. 1: 303. https://doi.org/10.4102/jamba.v9i1.303.

Ahlers, R., V. Perez Güida, M. Rusca, and K. Schwartz. 2013. "Unleashing Entrepreneurs or Controlling Unruly Providers? The Formalisation of Small-Scale Water Providers in Greater Maputo, Mozambique." *Journal of Development Studies* 49, no. 4: 470–482. https://doi.org/10.1080/00220388.2012.713467.

Ajibade, I. 2022. "The Resilience Fix to Climate Disasters: Recursive and Contested Relations With Equity and Justice-Based Transformations in the Global South." *Annals of the American Association of Geographers* 112, no. 8: 2230–2247. https://doi.org/10.1080/24694452.2022.2062290.

Alvarez, I. 2019. "What are the Main Criticisms of the World Bank and the IMF?" Bretton Woods Project, June 4. https://www.brettonwoodsproject.org/2019/06/what-are-the-main-criticisms-of-the-world-bank-and-the-imf/.

Bayliss, K., and B. Fine. 1998. "BeyondBureaucrats in Business: A Critical Review of the World Bank Approach to Privatization and Public Sector Reform." *Journal of International Development* 10, no. 7: 841–855. https://doi.org/10.1002/(SICI)1099-1328(1998110)10:7<841::AID-JID546>3.0.CO;2-N.

Berik, G. 2017. "Beyond the Rhetoric of Gender Equality at the World Bank and the IMF." *Canadian Journal of Development Studies/Revue Canadienne D'études Du Développement* 38, no. 4: 564–569. https://doi.org/10.1080/02255189.2017.1377062.

Birkland, T. A. 2016. "Policy Process Theory and Natural Hazards." In *Oxford Research Encyclopedia of Natural Hazard Science*. Oxford University Press. https://doi.org/10.1093/acrefore/9780199389407.013.75.

Boli, J., and G. M. Thomas. 1999. *Constructing World Culture: International Nongovernmental Organizations Since 1875*. Stanford University Press.

Bubeck, P., H. Kreibich, E. c. Penning-Rowsell, W. j. w. Botzen, H. de Moel, and F. Klijn. 2017. "Explaining Differences in Flood Management Approaches in Europe and in the USA – A Comparative Analysis." *Journal of Flood Risk Management* 10, no. 4: 436–445. https://doi.org/10.1111/jfr3.12151.

Cannon, T. 2002. "Gender and Climate Hazards in Bangladesh." *Gender and Development* 10, no. 2: 45–50. https://doi.org/10.1080/13552070215906.

Ciullo, A., J. H. Kwakkel, K. M. De Bruijn, N. Doorn, and F. Klijn. 2020. "Efficient or Fair? Operationalizing Ethical Principles in Flood Risk Management: A Case Study on the Dutch-German Rhine." *Risk Analysis* 40, no. 9: 1844–1862. https://doi.org/10.1111/risa.13527.

Cormier, B., and M. Manger. 2020. "The Evolution of World Bank Conditionality: A Quantitative Text Analysis." https://www.peio.me/wp-content/uploads/2020/01/PEIO13_paper_46.pdf.

de Goër de Herve, M. 2022. "Fair Strategies to Tackle Unfair Risks? Justice Considerations Within Flood Risk Management." *International Journal of Disaster Risk Reduction* 69: 102745. https://doi.org/10.1016/j.ijdrr.2021.102745.

DEFRA. 2004. "Foresight Future Flooding." https://assets.publishing.service.gov.uk/media/5a74c78de5274a3f93b48beb/04-947-flooding-summary.pdf.

DEFRA. 2005. "Making Space for Water."

Denton, F. 2002. "Climate Change Vulnerability, Impacts, and Adaptation: Why Does Gender Matter?" *Gender and Development* 10, no. 2: 10–20. https://doi.org/10.1080/13552070215903.

Desportes, I. 2020. "Repression Without Resistance: Disaster Responses in Authoritarian Low-Intensity Conflict Settings." https://repub.eur.nl/pub/131548/.

Erman, A., S. A. de Vries Robbe, S. F. Thies, K. Kabir, and M. Maruo. 2021. "Gender Dimensions of Disaster Risk and Resilience: Existing Evidence." http://hdl.handle.net/10986/35202.

European Commission. 2000. "Water Framework Directive." https://eur-lex.europa.eu/eli/dir/2000/60/oj.

European Commission. 2007. "Floods Directive." https://environment.ec.europa.eu/topics/water/floods_en.

Ferguson, S., M. van Ledden, S. Rubinyi, A. Campos, and T. Doeffinger. 2023. *Urban Flood Risk Handbook: Assessing Risk and Identifying Interventions*. World Bank Group. https://doi.org/10.1596/40141.

Fisher, S. 2010. "Violence Against Women and Natural Disasters: Findings From Post-Tsunami Sri Lanka." *Violence Against Women* 16, no. 8: 902–918. https://doi.org/10.1177/1077801210377649.

Floodsite. 2004. "Floodsite: Integrated Flood Risk Analysis and Management Methodologies." https://floodsite.net/html/work_programme1.asp.

Grafton, R. Q., S. Fanaian, J. Horne, et al. 2024. "Rethinking Responses to the World's Water Crises." *Nature Sustainability* 1–11: 11–21. https://doi.org/10.1038/s41893-024-01470-z.

Grigg, N. S. 2024. "Two Decades of Integrated Flood Management: Status, Barriers, and Strategies." *Climate* 12, no. 5: 67. https://doi.org/10.3390/cli12050067.

Güven, A. B. 2012. "The IMF, the World Bank, and the Global Economic Crisis: Exploring Paradigm Continuity." *Development and Change* 43, no. 4: 869–898. https://doi.org/10.1111/j.1467-7660.2012.01781.x.

Hanlon, J. 2006. "'Illegitimate' Loans: Lenders, Not Borrowers, Are Responsible." *Third World Quarterly* 27, no. 2: 211–226. https://doi.org/10.1080/01436590500432283.

Harries, T., and E. Penning-Rowsell. 2011. "Victim Pressure, Institutional Inertia and Climate Change Adaptation: The Case of Flood Risk." *Global Environmental Change* 21, no. 1: 188–197. https://doi.org/10.1016/j.gloenvcha.2010.09.002.

Hay, M., J. Skinner, and A. Norton. 2019. "Dam-Induced Displacement and Resettlement: A Literature Review." Future DAMS Working Paper 004. University of Manchester. https://doi.org/10.2139/ssrn.3538211.

Jones, B. 2018. "'A More Receptive Crowd Than Before': Explaining the World Bank's Gender Turn in the 2000s." *Progress in Development Studies* 18, no. 3: 172–188. https://doi.org/10.1177/1464993418766584.

Kenny, C., and M. O'Donnell. 2016. "Do the Results Match the Rhetoric? An Examination of World Bank Gender Projects." https://www.cgdev.org/publication/do-results-match-rhetoric-examination-world-bank-gender-projects.

Kentikelenis, A. E., T. H. Stubbs, and L. P. King. 2016. "IMF Conditionality and Development Policy Space, 1985–2014." *Review of International Political Economy* 23, no. 4: 543–582. https://doi.org/10.1080/09692290.2016.1174953.

Klein, R. P., M. M. García, L. Hill, and L. Louis. 2021. "Qualitative Content Analysis." In *The Routledge Handbook of Research Methods for Social-Ecological Systems*. Routledge.

Kovach, H., and S. Fourmy. 2006. *Kicking the Habit: How the World Bank and the IMF Are Still Addicted to Attaching Economic Policy Conditions to Aid*. Oxfam.

Kristof, M. J., M. C. Ramirez, L. Pereira, and S. Couvin. 2020. *A Data-Driven Framework to Address Gender Issues in Managing Flood Risks: Flood Risk Management Support Project for the City of Buenos Aires*. World Bank, Washington, DC. https://doi.org/10.1596/34375.

Kuhlicke, C., S. Seebauer, P. Hudson, et al. 2020. "The Behavioral Turn in Flood Risk Management, Its Assumptions and Potential Implications." *WIREs Water* 7, no. 3: e1418. https://doi.org/10.1002/wat2.1418.

Lintsen, H. 2002. "Two Centuries of Central Water Management in The Netherlands." *Technology and Culture* 43, no. 3: 549–568.

Lio Rosvold, E. 2020. "Disaggregated Determinants of Aid: Development Aid Projects in The Philippines." *Development and Policy Review* 38, no. 6: 783–803. https://doi.org/10.1111/dpr.12465.

Lloyd, V., and R. Weissman. 2002. "How International Monetary Fund and World Bank Policies Undermine Labor Power and Rights." *International Journal of Health Services* 32, no. 3: 433–442. https://doi.org/10.2190/WMC9-0WWJ-8QWR-UFPC.

Luo, T., A. Maddocks, C. Iceland, P. Ward, and H. Winsemius. 2015. "World's 15 Countries with the Most People Exposed to River Floods." https://www.wri.org/insights/worlds-15-countries-most-people-exposed-river-floods.

Macdonald, N., D. Chester, H. Sangster, B. Todd, and J. Hooke. 2012. "The Significance of Gilbert F. White's 1945 Paper 'Human Adjustment to Floods' in the Development of Risk and Hazard Management." *Progress in Physical Geography: Earth and Environment* 36, no. 1: 125–133. https://doi.org/10.1177/0309133311414607.

Marin, P. 2009. *Public Private Partnerships for Urban Water Utilities: A Review of Experiences in Developing Countries*. World Bank Publications.

Mathathu, T., and M. Seedat-Khan. 2022. "'Leaving no-One Behind': Mainstreaming Gender in Flood Early Warning Systems." *Alternation* 29, no. 2: 223–243. https://doi.org/10.29086/2519-5476/2022/v29n2a12.

McLindin, M. 2019. "The Challenges of Flood Warning Systems in the Developing World." In *Flood Risk Management*. Routledge.

Meigh, J. d., and J. m. Bartlett. 2010. "Integrated River Basin Management in Southeast Asia." *Journal of Flood Risk Management* 3, no. 3: 201–209. https://doi.org/10.1111/j.1753-318X.2010.01071.x.

Meyer, J. W., D. J. Frank, A. Hironaka, E. Schofer, and N. B. Tuma. 1997. "The Structuring of a World Environmental Regime, 1870–1990." *International Organization* 51, no. 4: 623–651. https://doi.org/10.1162/002081897550474.

Mobini, S., P. Becker, R. Larsson, and R. Berndtsson. 2020. "Systemic Inequity in Urban Flood Exposure and Damage Compensation." *Water* 12, no. 11: 3152. https://doi.org/10.3390/w12113152.

Molenaar, J. W., and J. C. M. Van Santen. 2006. "Perceptions of Water in a Changing Hydrological and Ecological Context: The Case of the Logone Flood Plains in Cameroon." *Geographical Journal* 172, no. 4: 331–347. https://doi.org/10.1111/j.1475-4959.2006.00216.x.

Morris, M., and P. Samuels. 2006. "FLOODsite (Integrated Flood Risk Analysis and Management Methodologies)—Research Relevant to the Dams Industry?"

Munasinghe, M., B. Menezes, and M. Preece. 1991. "Rio Reconstruction and Flood Prevention in Brazil." *Land Use Policy* 8, no. 4: 282–287. https://doi.org/10.1016/0264-8377(91)90018-E.

Oulahen, G. 2015. "Flood Insurance in Canada: Implications for Flood Management and Residential Vulnerability to Flood Hazards." *Environmental Management* 55, no. 3: 603–615. https://doi.org/10.1007/s00267-014-0416-6.

Oulahen, G., and J. Ventura. 2023. "Planning Use Values or Values-Based Planning? "Rolling With" Neoliberal Flood Risk Governance in

Vancouver, Canada." *Environment and Planning E: Nature and Space* 6, no. 4: 2700–2720. https://doi.org/10.1177/25148486221140878.

Owen, J. R., R. Zhang, and A. Arratia-Solar. 2020. "On the Economics of Project-Induced Displacement: A Critique of the Externality Principle in Resource Development Projects." *Journal of Cleaner Production* 276: 123247. https://doi.org/10.1016/j.jclepro.2020.123247.

Pahl-Wostl, C. 2007. "Transitions Towards Adaptive Management of Water Facing Climate and Global Change." *Water Resources Management* 21, no. 1: 49–62. https://doi.org/10.1007/s11269-006-9040-4.

Paik, W. 2011. "Authoritarianism and Humanitarian Aid: Regime Stability and External Relief in China and Myanmar." *Pacific Review* 24, no. 4: 439–462. https://doi.org/10.1080/09512748.2011.596560.

Parker, D. J. 2007. *Floods*. Taylor & Francis.

Peet, R. 2009. *Unholy Trinity the IMF, World Bank and WTO*. 2nd ed). Zed. Zed Books Ltd.

Penning-Rowsell, E., C. Johnson, and S. Tunstall. 2006. "'Signals' From Pre-Crisis Discourse: Lessons From UK Flooding for Global Environmental Policy Change?" *Global Environmental Change* 16, no. 4: 323–339. https://doi.org/10.1016/j.gloenvcha.2006.01.006.

Penning-Rowsell, E. C. 1996. "Flood-Hazard Response in Argentina." *Geographical Review* 86, no. 1: 72–90. https://doi.org/10.2307/215142.

Prügl, E. 2017. "Neoliberalism with a Feminist Face: Crafting a New Hegemony at the World Bank." *Feminist Economics* 23, no. 1: 30–53. https://doi.org/10.1080/13545701.2016.1198043.

Power, L. 2020. "New Ways or Old Tricks? The World Bank's Gender Strategy and Its Implications for Health." *International Journal of Health Services* 50, no. 1: 21–31. https://doi.org/10.1177/0020731419885090.

QSR International Pty Ltd. 2012. "NVivo Qualitative Data Analysis Software. Version 10."

Rashid, H., L. M. Hunt, and W. Haider. 2007. "Urban Flood Problems in Dhaka, Bangladesh: Slum Residents' Choices for Relocation to Flood-Free Areas." *Environmental Management* 40, no. 1: 95–104. https://doi.org/10.1007/s00267-006-0233-7.

Rentschler, J., M. Salhab, and B. A. Jafino. 2022. "Flood Exposure and Poverty in 188 Countries." *Nature Communications* 13, no. 1: 3527. https://doi.org/10.1038/s41467-022-30727-4.

Reyes, D. D., and J. L. Lu. 2016. "Gender Dimension in Disaster Situations: A Case Study of Flood Prone Women in Malabon City, Metro Manila." *International Journal of Disaster Risk Reduction* 15: 162–168. https://doi.org/10.1016/j.ijdrr.2015.11.001.

Rey-Valette, H., S. Robert, and B. Rulleau. 2019. "Resistance to Relocation in Flood-Vulnerable Coastal Areas: A Proposed Composite Index." *Climate Policy* 19, no. 2: 206–218. https://doi.org/10.1080/14693062.2018.1482823.

Rijke, J., S. van Herk, C. Zevenbergen, and R. Ashley. 2012. "Room for the River: Delivering Integrated River Basin Management in The Netherlands." *International Journal of River Basin Management* 10, no. 4: 369–382. https://doi.org/10.1080/15715124.2012.739173.

Rooney, E. 2024. "Failed Privatisation in Urban Water Utilities: Can PuPs Pick Up the Pieces? Reviewing Evidence From Dar Es Salaam, 2005–2018." *Geoforum* 152: 103998. https://doi.org/10.1016/j.geoforum.2024.103998.

Ruiters, G., and L. Smith. 2005. "The Public/Private Conundrum of Urban Water: A View from South Africa." In *In the Nature of Cities*. Routledge.

Samuels, P. 2009. "Flood Risk Management: Research and Practice." Proceedings of the European Conference on Flood Risk Management Research Into Practice (FloodRisk 2008), Oxford, UK, 30 September-2 October 2008.

Schoner, R. J. 2020. "Empowering the Individual: Repressive Regimes in the Human Rights Committee."

Sharma, S. E. 2021. "Reactive, Individualistic and Disciplinary: The Urban Resilience Project in Dhaka." *New Political Economy* 26, no. 6: 1078–1091. https://doi.org/10.1080/13563467.2021.1899152.

Thomas, K. J. A. 2002. "Development Projects and Involuntary Population Displacement: The World Bank's Attempt to Correct Past Failures." *Population Research and Policy Review* 21, no. 4: 339–349. https://doi.org/10.1023/A:1020004429047.

Toussaint, E. 2024. "World Bank and IMF Support to Dictatorships." CADTM, October 18. https://www.cadtm.org/World-Bank-and-IMF-support-to-dictatorships.

van der Ploeg, L., and F. Vanclay. 2017. "A Human Rights Based Approach to Project Induced Displacement and Resettlement." *Impact Assessment and Project Appraisal* 35, no. 1: 34–52. https://doi.org/10.1080/14615517.2016.1271538.

Van Waeyenberge, E., B. Fine, and K. Bayliss. 2015. "The World Bank, Neo-Liberalism and Development Research." In *The Political Economy of Development*. Pluto Press.

Wang, L., S. Cui, Y. Li, et al. 2022. "A Review of the Flood Management: From Flood Control to Flood Resilience." *Heliyon* 8, no. 11: e11763. https://doi.org/10.1016/j.heliyon.2022.e11763.

Werritty, A. 2006. "Sustainable Flood Management: Oxymoron or New Paradigm?" *Area* 38, no. 1: 16–23.

White, G. F. 1945. *Human Adjustment to Floods: A Geographical Approach to the Flood Problem in the United States*. University of Chicago.

WMO. 2022. "Flood and Drought Management Programmes Mark Milestones." World Meteorological Organization, August 30. https://wmo.int/media/news/flood-and-drought-management-programmes-mark-milestones.

World Bank, ed. 1993. *Water Resources Management*. 3rd ed. World Bank.

World Bank. 2004. *Involuntary Resettlement Sourcebook: Planning and Implementation in Development Projects*. World Bank. https://openknowledge.worldbank.org/entities/publication/4d1d7977-2a99-593d-a612-f10658aee0ee.

World Bank. 2005. *Review of World Bank Conditionality*. World Bank. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/en/228751468134390047.

World Bank. 2022. *Reducing Disaster Risks from Natural Hazards An Evaluation of the World Bank's Support, Fiscal Years 2010–2020 (Independent Evaluation Group)*. World Bank.

World Bank. 2023. *GFDRR Annual Report 2022: Bringing Resilience to Scale [Text/HTML]*. World Bank. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099904102272326411/IDU0242fa9a607c8804e9a0b0d404a431f9a65a9.

World Bank. 2024. *Knowledge Bank*. World Bank. https://www.worldbank.org/en/about/unit/brief/knowledge-bank.

["1975 Romania P008696"]. Legal ISC Files. 1975. *Romania—Flood Recovery Project: Loan 1169—Loan Agreement—Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/860501468333549446/Romania-Flood-Recovery-Project-Loan-1169-Loan-Agreement-Conformed.

["1976 Pakistan P010104"]. Legal ISC Files. 1976. *Pakistan—1976 Flood Damage Restoration Project: Credit 0683—Credit Agreement—Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/829561468289842848/Pakistan-1976-Flood-Damage-Restoration-Project-Credit-0683-Credit-Agreement-Conformed.

["1982 Yemen P005870"]. Legal ISC Files. 1982. *Yemen—Roads Flood Reconstruction Project: Credit 1295—Credit Agreement—Conformed*

(English). World Bank Group. http://documents.worldbank.org/curated/en/513561468125084027/Yemen-Roads-Flood-Reconstruction-Project-Credit-1295-Credit-Agreement-Conformed.

["1985 Bangladesh P009488"]. Legal ISC Files. 1985. *Bangladesh—Flood Rehabilitation Project: Credit 1587—Credit Agreement—Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/346751468220800854/Bangladesh-Flood-Rehabilitation-Project-Credit-1587-Credit-Agreement-Conformed.

["1988 Brazil P006491"]. Legal Dept of World Bank. 1988. *Conformed Copy—L2975—Rio Flood Reconstruction and Prevention Project—Loan Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/683841488897456827/Conformed-Copy-L2975-Rio-Flood-Reconstruction-and-Prevention-Project-Loan-Agreement.

["1988 Nepal P010309"]. Legal Dept of World Bank. 1988. *Conformed Copy—C1922—Road Flood Rehabilitation Project—Development Credit Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/159841468290420102/Conformed-Copy-C1922-Road-Flood-Rehabilitation-Project-Development-Credit-Agreement.

["1989 Sudan P002640"]. Legal Dept of World Bank. 1989. *Conformed Copy—C2011—Emergency Flood Reconstruction Project—Development Credit Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/520331468302999754/Conformed-Copy-C2011-Emergency-Flood-Reconstruction-Project-Development-Credit-Agreement.

["1989 Yemen P005896"]. Legal Dept of World Bank. 1989. *Conformed Copy—C2073—Emergency Flood Reconstruction Project—Development Credit Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/830191468171842155/Conformed-Copy-C2073-Emergency-Flood-Reconstruction-Project-Development-Credit-Agreement.

["1990 Yemen P005808"]. Legal Dept of World Bank. 1990. *Conformed Copy—C2160—Taiz Flood Disaster Prevention and Municipal Development Project—Development Credit Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/521671468337307407/Conformed-Copy-C2160-Taiz-Flood-Disaster-Prevention-and-Municipal-Development-Project-Development-Credit-Agreement.

["1992 Iran P005213"]. Legal Dept of World Bank. 1992. *Conformed Copy—L3478—Sistan River Flood Works Rehabilitation Project—Loan Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/510221468261242967/Conformed-Copy-L3478-Sistan-River-Flood-Works-Rehabilitation-Project-Loan-Agreement.

["1992 Pakistan P010415"]. Legal Dept of World Bank. 1992. *Conformed Copy—C2468—1992 Flood Damage Restoration Project—Development Credit Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/757931468099586569/Conformed-Copy-C2468-1992-Flood-Damage-Restoration-Project-Development-Credit-Agreement.

["1993 China P003597"]. Legal ISC Files. 1993. *China—Taihu Basin Flood Control Project: Loan 3560—Loan Agreement—Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/944091468019740068/China-Taihu-Basin-Flood-Control-Project-Loan-3560-Loan-Agreement-Conformed.

["1996 Yemen P048522"]. Legal Dept of World Bank. 1996. *Conformed Copy—C2932—Emergency Flood Rehabilitation Project—Development Credit Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/929391468168553504/Conformed-Copy-C2932-Emergency-Flood-Rehabilitation-Project-Development-Credit-Agreement.

["1997 Poland P053796"]. Legal Dept of World Bank. 1997. *Conformed Copy—L4264—Emergency Flood Recovery Project—Loan Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/225631468293441633/Conformed-Copy-L4264-Emergency-Flood-Recovery-Project-Loan-Agreement.

["1998 Bangladesh P063089"]. Legal Dept of World Bank. 1998. *Conformed Copy—C3144—Emergency Flood Recovery Project—Development Credit Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/279631467992007970/Conformed-Copy-C3144-Emergency-Flood-Recovery-Project-Development-Credit-Agreement.

["1998 Tajikistan P059055"]. Legal Dept of World Bank. 1998. *Conformed Copy—C3123—Emergency Flood Assistance Project—Development Credit Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/957021468303540818/Conformed-Copy-C3123-Emergency-Flood-Assistance-Project-Development-Credit-Agreement.

["1998 Türkiye P058877"]. Legal Dept of World Bank. 1998. *Conformed Copy—L4388—Emergency Flood and Earthquake Recovery Project—Loan Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/488121468172140941/Conformed-Copy-L4388-Emergency-Flood-and-Earthquake-Recovery-Project-Loan-Agreement.

["1999 China P063123"]. Legal Dept of World Bank. 1999. *Conformed Copy—C3169—Yangtze Flood Emergency Rehabilitation Project—Loan Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/409401468236655822/Conformed-Copy-C3169-Yangtze-Flood-Emergency-Rehabilitation-Project-Loan-Agreement.

["1999 Kyrgyz P062682"]. Legal Dept of World Bank. 1999. *Conformed Copy—C3166—Flood Emergency Project—Development Credit Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/429191468040581491/Conformed-Copy-C3166-Flood-Emergency-Project-Development-Credit-Agreement.

["2004 Djibouti P089968"]. Uprety, Kishor. 2004. *Agreement Amending Financing Agreement, Credit 3977, Grant H276 Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/123411468244513651/Agreement-Amending-Financing-Agreement-Credit-3977-Grant-H276-Conformed.

["2006 Argentina P088220"]. Pastor, Reynaldo F. 2006. *Loan Agreement L7289-AR Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/930381468003577357/Loan-Agreement-L7289-AR-Conformed.

["2007 Argentina P093491"]. Pastor, Reynaldo F. 2007. *Loan Agreement L7382-AR Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/774961468210265608/Loan-Agreement-L7382-AR-Conformed.

["2007 Kenya P074106"]. Rukuba-Ngaiza, Nightingale. 2007. *Financing Agreement C4278-KE Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/827671468041636458/Financing-Agreement-C4278-KE-Conformed.

["2009 China P101829"]. Ahmed, Syed I. 2009. *Loan Agreement for L7712-CN Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/101561468017966063/Loan-Agreement-for-L7712-CN-Conformed.

["2013 China P128867"]. Uprety, Kishor. 2013. *Official Documents-Loan Agreement for Loan 8237-CN (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/945981468024239423/Official-Documents-Loan-Agreement-for-Loan-8237-CN-Closing-Package.

["2014 Bosnia P143844"]. Shayne, Adam. 2014. *Official Documents-Financing Agreement for Credit 5444-BA (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/596941468035474706/Official-Documents-Financing-Agreement-for-Credit-5444-BA-Closing-Package.

["2014 Bosnia P151157"]. Tashieva, Aimonchok. 2014. *Official Documents-Financing Agreement, Credit 5529-BA (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/475131468014049851/Official-Documents-Financing-Agreement-Credit-5529-BA-Closing-Package.

["2014 Nigeria P130840"]. Baimu, Evarist F. 2014. *Official Documents-Financing Agreement for Credit 5510-NG (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/257441468290101933/Official-Documents-Financing-Agreement-for-Credit-5510-NG-Closing-Package.

["2014 Serbia P152018"]. Jauregui-Zabalaga, Ramiro Ignacio. 2014. *Official Documents-Loan Agreement for Loan 8449-YF (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/523851468092973770/Official-Documents-Loan-Agreement-for-Loan-8449-YF-Closing-Package.

["2016 Argentina P145686"]. Altimari Montiel, Fabiola. 2016. *Official Documents-Loan Agreement for Loan 8628-AR (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/293411479226704522/Official-Documents-Loan-Agreement-for-Loan-8628-AR-Closing-Package.

["2016 Myanmar P158194"]. Hristov, Manush A. 2016. *Official Documents- Financing Agreement for Credit 5889-MM (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/169191486392942616/Official-Documents-Financing-Agreement-for-Credit-5889-MM-Closing-Package.

["2017 Philippines P153814"]. Bertaud, Helene. 2017. *Official Documents- Loan Agreement for Loan 8784-PH (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/437871516987960262/Official-Documents-Loan-Agreement-for-Loan-8784-PH-Closing-Package.

["2022 Türkiye P176608"]. LEGKL. 2022. *Official Documents-Loan Agreement for Loan 9430-TR.pdf (English)*. World Bank Group. http://documents.worldbank.org/curated/en/099010101042342939/P176608082 1f3e0d008b0a067d8a1809cbe.

["2023 Argentina P178534"]. LEGKL. 2023. *Official Documents-Loan Agreement for Loan 9516-AR.pdf (English)*. World Bank Group. http://documents.worldbank.org/curated/en/099090623125036685/P1785340b5569a0410a88e0e5df13c81189.

["2023 Pakistan P180323"]. LEGKL. 2023. *Official Documents-Financing Agreement for Credit 7333-PK.pdf (English)*. World Bank Group. http://documents.worldbank.org/curated/en/099070523090041257/P18032302832610ef0ab2203b3d3f3c83bc.

"2000 Mozambique P070432". Legal Dept of World Bank. 2000. *Conformed Copy—C3336—Flood Emergency Recovery Project—Development Credit Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/686251468062932056/Conformed-Copy-C3336-Flood-Emergency-Recovery-Project-Development-Credit-Agreement.

"2001 Cambodia P073394". Legal Dept of World Bank. 2001. *Conformed Copy—C3472—Flood Emergency Rehabilitation Project—Development Credit Agreement (English)*. World Bank Group. http://documents.worldbank.org/curated/en/227201468007220419/Conformed-Copy-C3472-Flood-Emergency-Rehabilitation-Project-Development-Credit-Agreement.

"2001 Vietnam P042927". Png, Margaret. 2001. *Financing Agreement for Credit 3448.1-VN Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/683351468128694732/Financing-Agreement-for-Credit-3448-1-VN-Conformed.

"2007 Poland P086768". 2007. *Pardinas Ocana, Claudia M. Loan Agreement L7436-PL Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/345031468333298930/Loan-Agreement-L7436-PL-Conformed.

"2010 China P098078". Ahmed, Syed I. 2010. *Loan Agreement for Loan 7938-CN Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/812011468243256671/Loan-Agreement-for-Loan-7938-CN-Conformed.

"2011 India P122096". Uprety, Kishor. 2011. *Financing Agreement for Credit 4802-IN Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/612731468033586870/Financing-Agreement-for-Credit-4802-IN-Conformed.

"2011 Pakistan P125105". Serrano, Martin M. 2011. *Financing Agreement for Credits 4911-PK and 4910-PK Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/465161468087574168/Financing-Agreement-for-Credits-4911-PK-and-4910-PK-Conformed.

"2012 Indonesia P111034". Good, Melinda. 2012. *Official Documents-Loan Agreement for Loan 8121-ID (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/718411468282535095/Official-Documents-Loan-Agreement-for-Loan-8121-ID-Closing-Package.

"2013 Cameroon P143940". Nwogu, Nneoma Veronica. 2013. *Official Documents-Financing Agreement for Credit 5276-CM (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/418741468012663502/Official-Documents-Financing-Agreement-for-Credit-5276-CM-Closing-Package.

"2014 Guyana P147250". Grinsteins, Gabriela. 2014. *Official Documents-Financing Agreement, C5474-GY (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/498661468034472281/Official-Documents-Financing-Agreement-C5474-GY-Closing-Package.

"2015 Malawi P154803". Mukaindo, Stephen. 2015. *Official Documents-Financing Agreement for Credit 5636-MW and Grant D058-MW (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/551821468300289890/Official-Documents-Financing-Agreement-for-Credit-5636-MW-and-Grant-D058-MW-Closing-Package.

"2016 India P154990". Serrano, Martin M. 2016. *Official Documents-Financing Agreement, Credit 5695-IN (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/559281468250231521/Official-Documents-Financing-Agreement-Credit-5695-IN-Closing-Package.

"2017 Vietnam P152460". Panou, Aristeidis. 2017. *Official Documents-Loan Agreement for Loan 8614-VN (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/837181493751625586/Official-Documents-Loan-Agreement-for-Loan-8614-VN-Closing-Package.

"2020 India P162679". LEGKL. 2020. *Official Documents-Loan Agreement for Loan 9025-IN (Closing Package) (English)*. World Bank Group. http://documents.worldbank.org/curated/en/331461589555659251/Official-Documents-Loan-Agreement-for-Loan-9025-IN-Closing-Package.

"2022 Ethiopia P176327". LEGKL. 2022. *Official Documents-Financing Agreement for Credit E124-ET.pdf (English)*. World Bank Group. http://documents.worldbank.org/curated/en/099425001232339321/P1763 2704bd0d706b0ac1f0cc7f88ede350.

"2022 Pakistan P179981". LEGKL. 2022. *Official Documents-Financing Agreement for Credit 7250-PK.pdf (English)*. World Bank Group. http://documents.worldbank.org/curated/en/099430401102343542/P1799 8107175010b708785056a8a605e677.

2011 Colombia P111479. Sabella, Mariangeles. 2011. *Agreement for Loan 7985-CO Conformed (English)*. World Bank Group. http://documents.worldbank.org/curated/en/391611468231572267/Agreement-for-Loan-7985-CO-Conformed.