

# Funding Climate Change Initiatives: Utilising the Law for Enhancing Financial Management in Cities

J Wright\*

Online ISSN  
1727-3781

**P·E·R**

Pioneer in peer-reviewed,  
open access online law publications

## Author

Johandri Wright

## Affiliation

North-West University,  
South Africa

## Email

johandri.wright@gmail.com

## Date Submitted

17 March 2023

## Date Revised

27 November 2023

## Date Accepted

27 November 2023

## Date Published

19 February 2024

Editor Mr M Laubscher

## Journal Editor

Prof C Rautenbach

## How to cite this contribution

Wright J "Funding Climate Change Initiatives: Utilising the Law for Enhancing Financial Management in Cities" *PER / PELJ* 2024(27) - DOI  
<http://dx.doi.org/10.17159/1727-3781/2024/v27i0a15809>

## Copyright



## DOI

<http://dx.doi.org/10.17159/1727-3781/2024/v27i0a15809>

## Abstract

Climate change affects cities disproportionately, and some cities have limited fiscal capacity to address climate change. It is therefore necessary to ensure that the climate funds cities do have at their disposal are used in a way that maximises their impact. However, financial mismanagement and corruption have led to significant money losses in climate funds. Although measures against general public sector corruption can be used to improve climate finance management, the climate finance market poses some unique challenges. Traditional anti-corruption measures can be rethought to maintain their effectiveness against corruption in climate finance. Against this background, the article explores how international and regional law can be used by cities to improve the management of climate funds. Eight financial controls are identified and critically discussed to show how they can be effective in the specific case of climate finance. The article also shows some examples of where these financial controls have been implemented in cities.

## Keywords

Climate finance; corruption, municipal governance; city governance; finance controls; financial management; anti-corruption.

.....

## 1 Introduction

It is no secret that climate change threatens the viability of human life.<sup>1</sup> Cities have been found to be particularly vulnerable to the negative impacts of climate change.<sup>2</sup> This vulnerability is caused by several factors, including population density, the urban heat island effect and other challenges associated with urbanisation.<sup>3</sup> Extreme weather events and other climate change-related events are particularly disruptive to complex urban systems.<sup>4</sup> Studies by the United Nations (UN) conducted in 2021 project that more than three billion urban dwellers will be exposed to the impacts of climate change by 2050.<sup>5</sup> Some of these impacts are water scarcity, air pollution, the impairment of residents' health, damage to infrastructure and food shortages.<sup>6</sup> The State of Cities Climate Finance Report (SCCFR) shows that in 2021 seventy per cent of cities had already experience the damaging effects of climate change.<sup>7</sup>

Cities are participants in global climate governance in their own right.<sup>8</sup> The World Bank, the Organisation for Economic Co-operation and Development (OECD) and the UN have conducted studies suggesting that cities are now actively implementing initiatives to address climate change, regardless of whether their national governments are doing the same.<sup>9</sup> The SCCFR shows that 6,150 cities participate in the Global Covenant of Mayors for Climate and Energy, which represents about twenty per cent of the world's urban population.<sup>10</sup> Cities also participate in global climate change initiatives through smaller networks such as the C40 Cities, an organisation which is

---

\* Johandri Wright. LLB (*cum laude*) LLM (*cum laude*) PhD in Law and Development. Post Doctoral Fellow: SARChI Chair in Cities, Law and Environmental Sustainability, Faculty of Law, North-West University (Potchefstroom Campus), South Africa. Email: Johandri.wright@gmail.com. ORCID: <https://orcid.org/0000-0002-3317-9057>. Thank you to Dr MD Glasser for his valuable feedback on previous versions of this article. This research was conducted with the financial support of the National Research Foundation of South Africa (NRF) (Grant No. 115581). All viewpoints and errors are the author's own.

1 Transparency International *Global Corruption Report 2*.

2 OECD *Cities and Climate Change 4*; Hunt and Watkiss 2011 *Climatic Change 13*; Negreiros *et al The State of Cities Climate Finance ii*; Doku 2021 *European Journal of Development Research 3026*.

3 OECD *Cities and Climate Change 4*.

4 OECD *Cities and Climate Change 4*.

5 Negreiros *et al The State of Cities Climate Finance ii*.

6 For an extensive explanation and description of the effects of climate change and their impacts on cities, see Hunt and Watkiss 2011 *Climatic Change 14*.

7 Negreiros *et al The State of Cities Climate Finance ii*.

8 For the development of city climate change action see Gordon 2013 *Canadian Foreign Policy Journal 288*.

9 World Bank *Cities and Climate Change 14*; Negreiros *et al The State of Cities Climate Finance ii*; OECD *Cities and Climate Change 4*; Gordon 2013 *Canadian Foreign Policy Journal 288*.

10 Negreiros *et al The State of Cities Climate Finance ii*.

made up of about 100 cities.<sup>11</sup> It can thus be seen that cities are actively taking responsibility for implementing climate change initiatives in addition to their existing mandates.

The World Bank reported that many cities in developing countries are already operating under extreme financial constraints to provide basic services to residents living in poor conditions.<sup>12</sup> These cities are therefore unable to allocate a portion of their budgets to implement climate change initiatives.<sup>13</sup> This has led to cities sourcing funds for climate projects from outside their normal revenue base.<sup>14</sup> Many cities are looking for national grants, private investments, multilateral agreements<sup>15</sup> or international climate projects<sup>16</sup> to fund climate change initiatives.

Meanwhile, corruption and financial mismanagement are an obstacle to cities' ambitions to implement climate change projects.<sup>17</sup> Transparency International reports that an estimated 560 million USD in city climate funds are lost to illegal activities such as corruption each year.<sup>18</sup> The scarcity of funds for climate change initiatives requires sound financial management during the implementation of climate projects to ensure that they get the maximum benefit from investments. This raises the question of how the management of climate funds in cities can be improved.

This article looks specifically at how international and regional law can be used to improve the management of climate funds in cities. It first discusses the various challenges cities face in managing climate funds. Then the article critically analyses the law and policy measures related to financial management in cities as found in international and regional law and policy. The analysis is done within the limits and constraints of the many differences that may exist between cities – different governance structures, capacities, authorities, and unique social and economic contexts. It also presents some examples of cities using innovative law and policy tools to

---

<sup>11</sup> C40 Cities 2023 <https://www.c40.org/about-c40/>.

<sup>12</sup> World Bank *Cities and Climate Change* 9.

<sup>13</sup> Sullivan, Gouldson, and Webber 2013 *Climate Policy* 514.

<sup>14</sup> Depending on the city's governance structure, a city's normal revenue base may consist of rates for municipal services, local taxes and a portion of the national budget allocated by the national or state government.

<sup>15</sup> The World Bank provides financial support to cities for climate change initiatives through several projects such as Development Program Loans and the City Climate Finance Gap Fund. World Bank *Cities and Climate Change* 9.

<sup>16</sup> An example of such a project is the Eco<sup>2</sup> Cities, which is an organisation that helps city governments to plan, design, invest and manage climate change initiatives. World Bank *Cities and Climate Change* 9.

<sup>17</sup> Transparency International *Corruption-Free Climate Finance* 4; Negreiros *et al The State of Cities Climate Finance* ii.

<sup>18</sup> Transparency International *Corruption-Free Climate Finance* 4.

improve their financial management. Finally, the article concludes with some observations and important recommendations.

## 2 Challenges of financial management in cities

In this section "the city" refers to the local authority or government structure responsible for local governance. "Climate finance" or "climate funds" can be understood as finance, or development aid, which are mobilised by local, national, international or transnational institutions and allocated for climate mitigation or adaptation projects to be implemented by the city. This section looks at the sources from which a city can fund its climate change projects.<sup>19</sup>

### 2.1 The City Climate Funding Landscape

Circumstances often require cities to be innovative when they source funds for climate change projects and at times one project may be funded by a patchwork of different sources. Although no two cities can truly be compared to each other, one can divide the sources from which they may fund climate change projects as follows: the city's own annual budget, private investments, national grants, multilateral agreements, and international projects.

A city's own budget, and the revenue base it can use to fund different initiatives such as climate change projects, depends on its local fiscal autonomy and the way the government structures of that country are designed. Local fiscal autonomy refers to the ability of cities to set their own taxes and raise their own revenues. Fiscal autonomy also involves the competency of cities to decide how and when to spend their revenues and other sources of income. The degree of fiscal autonomy cities enjoy may differ vastly from one another. Cities are considered as completely financially autonomous if they can determine their own tax base, tax rate and any tax reliefs without having to consult a higher level of government.<sup>20</sup> On the other hand, cities are considered as not having fiscal autonomy if they cannot raise any revenue through local taxes, fees, and charges.<sup>21</sup> Some cities are legally able to structure their budgets and revenue collection to fund climate change projects. For example, cities can allocate the revenue from the air pollution tax, carbon tax or environmental fines, etc. to climate change projects.<sup>22</sup> Furthermore, nothing would prevent such cities from also using a portion of their "normal" taxes such as property taxes,

---

<sup>19</sup> The phrase "climate change projects" refers to any projects which cities may undertake to implement climate adaptation or mitigation strategies. Therefore they may involve expenditure towards more efficient infrastructure or awareness raising campaigns, for example.

<sup>20</sup> OECD *Fiscal Autonomy of Sub-Central Governments* 6.

<sup>21</sup> OECD *Fiscal Autonomy of Sub-Central Governments* 6.

<sup>22</sup> Zhifu *et al* 2019 *Journal of Cleaner Production* 582; Rosenzweig *et al* 2010 *Nature* 909.

business taxes, advertising taxes and excise taxes to fund climate change projects.

Cities with sufficient fiscal autonomy, in partnership with the community, are also able to fund climate change projects using tax credits.<sup>23</sup> In this instance cities give a discount on certain taxes and rates if the taxpayer participates in a specific climate change project such as energy system retrofits.<sup>24</sup> Although such rebates are usually referred to as tax expenditures, they should be considered as the part of the city budget that is invested in the climate change project.<sup>25</sup> The taxpayers who participate in the climate change project also contribute to the financing of the project, as they bear the costs for the energy retrofiting, for example.<sup>26</sup>

The phrase "private investments" refers to investments by non-governmental actors such as banks, businesses or other private persons providing capital (money) to the city on condition that it will be used to implement a specific climate change project.<sup>27</sup> Private investors may also decide not to provide money to the city at all, but instead implement a climate project on their own that benefits the whole or part of the city. Private investment can also include capital improvements, technical assistance, capacity building or other types of professional and technical advice that the city would have had to pay for but which was provided free of charge by private actors.<sup>28</sup> Such investments are widely accepted options used to close the financing gap for climate change projects in cities.<sup>29</sup>

Another essential source for funding climate change projects in cities is intergovernmental transfers.<sup>30</sup> Government structures differ from country to country. Depending on the context of a country, intergovernmental funding may be unconditional or conditional, may be once-off or recurrent, or a

---

<sup>23</sup> Wheeler 2008 *Journal of the American Planning Association* 481; Rosenzweig *et al* 2010 *Nature* 909.

<sup>24</sup> Gonzales-Limón, Pablo-Romero and Sanchez-Braza 2013 *Energy* 277; Rosenzweig *et al* 2010 *Nature* 909.

<sup>25</sup> Rosenzweig *et al* 2010 *Nature* 909.

<sup>26</sup> Gonzales-Limón, Pablo-Romero and Sanchez-Braza 2013 *Energy* 277; Rosenzweig *et al* 2010 *Nature* 909.

<sup>27</sup> Tall *et al* *Enabling Private Investment* 14. Private investments can take place in accordance with different models. They may take the form of once-off sums of money, or a private investor may take on a more active role such as in a public/private partnership, where the city and the private investor engage in the climate change project in a manner similar to conducting business as a traditional partnership or joint venture.

<sup>28</sup> Tall *et al* *Enabling Private Investment* 14.

<sup>29</sup> C40Cities 2022 [https://www.c40knowledgehub.org/s/article/Six-effective-ways-for-cities-to-invest-in-climate-action?language=en\\_US](https://www.c40knowledgehub.org/s/article/Six-effective-ways-for-cities-to-invest-in-climate-action?language=en_US); Colenbrander *et al* *Financing Low-Carbon, Climate-Resilient Cities* 5; Tall *et al* *Enabling Private Investment* 10.

<sup>30</sup> Colenbrander *et al* *Financing Low-Carbon, Climate-Resilient Cities* 5; Patel *Funding for Adaptation to Climate Change* 18; Negreiros *et al* *The State of Cities Climate Finance* 9.

combination of these.<sup>31</sup> For example, in South Africa cities gain access to intergovernmental transfers each year through receiving a once-off unconditional amount called the equitable share.<sup>32</sup> South African cities may also apply to national government to access conditional funding through various government grant schemes. These are allocated over a specified period for a specific purpose such as upgrading public transport.<sup>33</sup>

Today many cities partner with multilateral and bilateral development aid agencies such as the *Vertical Integration and Learning for Low-Emission Development in Africa and Southeast Asia* (V-LED) to access grant aid, concessional loans, and capacity building schemes.<sup>34</sup> Many of the funds accessed through multilateral or bilateral development aid agencies are governed on an *ad hoc* basis.<sup>35</sup> This means that each agreement is tailored to fit the unique needs of both the city and the development agency. These agreements may relate to long-term or short-term loans, to investments, or to conditional or unconditional grants.<sup>36</sup> Such sources of funding are growing to become among the primary modes of funding climate change initiatives in cities.<sup>37</sup>

Finally, countries classified as low- or middle-income countries may access funding for climate change projects from international sources under the United Nations Framework Convention on Climate Change (UNFCCC).<sup>38</sup> These are dedicated global climate change funds administered under three projects: the Least Developed Country Fund (LDCF), the Special Climate Change Fund (SCCF), and the Adaptation Fund (AF).<sup>39</sup> The LDCF specifically supports countries on the least-developed list to conduct National Adaptation Programs of Action.<sup>40</sup> The SCCF supports climate-related projects involving technology transfer, mitigation and adaptation strategies and the AF funds adaptation projects from a tax levied under the Kyoto Protocol.<sup>41</sup> The SCCF and the AF provide direct funding to cities, which can be applied for without the involvement of their national

---

<sup>31</sup> Patel *Funding for Adaptation to Climate Change* 18.

<sup>32</sup> Section 5 of the *Division of Revenue Act* 5 of 2022.

<sup>33</sup> One of these grants is the Municipal Infrastructure Grant. DPLG 2004 <https://www.cogta.gov.za/mig/docs/3.pdf>.

<sup>34</sup> Other examples include C40FinanceFacility, Global Covenant of Mayors and the World Bank. World Bank *Cities and Climate Change* 39; Patel *Funding for Adaptation to Climate Change* 16; Reddy *et al Local Government Climate Change Support Programme* 4.

<sup>35</sup> World Bank *Cities and Climate Change* 3.

<sup>36</sup> Patel *Funding for Adaptation to Climate Change* 16.

<sup>37</sup> World Bank *Cities and Climate Change* 39; Climate Policy Initiative 2022 <https://www.climatepolicyinitiative.org/the-topics/blended-finance/>.

<sup>38</sup> Colenbrander *et al Financing Low-Carbon, Climate-Resilient Cities* 5; United Nations Climate Change 2022 <https://bit.ly/3A3RVCE>.

<sup>39</sup> United Nations Climate Change 2022 <https://bit.ly/3A3RVCE>.

<sup>40</sup> United Nations Climate Change 2022 <https://bit.ly/3A3RVCE>.

<sup>41</sup> United Nations Climate Change 2022 <https://bit.ly/3A3RVCE>.

governments. However, to access funding from the LDCF, cities would have to apply via their national government structures.

There are thus multiple modes for cities to secure climate funds, but the UN shows that despite these, more investments are needed to sufficiently address climate change.<sup>42</sup> Good climate finance management should therefore be aimed at maximising the effectiveness of funding to achieve climate mitigation and adaptation objectives.

## **2.2 Corruption as a challenge in managing climate funds**

Corruption and gross financial mismanagement have been observed in the climate finance sector.<sup>43</sup> When one examines the nature of public sector corruption, it is possible to describe corruption in the climate finance sector as an act with the intention of abusing a position of power (for example, having the authority to make decisions that involve public spending or the allocation of climate funds) to obtain advantages one is usually not entitled to and violating the formal and informal rules that govern the climate finance sector.<sup>44</sup>

As in all other public sectors, corrupt activities in climate funds may include missing, incomplete, inadequate or ambiguous reports and official documents so that it is difficult to effectively monitor and evaluate the use of funds.<sup>45</sup> Observers have also reported undue political interference and conflicts of interest, especially when allocating climate funds.<sup>46</sup> The climate finance (public) sector has also not been untouched by extortion, bribery, fraud, influence peddling, nepotism, embezzlement, favouritism, rent-seeking or political patronage.<sup>47</sup>

Then there are some corrupt activities which seem to particularly flourish in the climate finance sector. "Speed money" or "facilitation fees" have become almost normal in many cities, where public officials are being paid to expedite certain official procedures, such as obtaining licenses.<sup>48</sup> Such activities appear to be more prevalent in developing countries that are in the process of decentralising governance.<sup>49</sup> Some public officials have adopted

---

<sup>42</sup> United Cities and Local Governments *Local Government Finance* 17.

<sup>43</sup> Sullivan, Gouldson, and Webber 2013 *Climate Policy* 519; Lehtinen *et al* 2022 *International Journal of Project Management* 347; Elges and Martin *Protecting Climate Finance* 921.

<sup>44</sup> Wright *Legal Perspectives* 101.

<sup>45</sup> Kabir *et al* 2021 *Journal of Southwest Jiaotong University* 55.

<sup>46</sup> Kabir *et al* 2021 *Journal of Southwest Jiaotong University* 58, 60.

<sup>47</sup> Opoku *et al* 2022 *African Journal on Land Policy and Geospatial Sciences* 594.

<sup>48</sup> Opoku *et al* 2022 *African Journal on Land Policy and Geospatial Sciences* 601.

<sup>49</sup> Opoku *et al* 2022 *African Journal on Land Policy and Geospatial Sciences* 601; Lee and Moubark 2022 *Finance Research Letters* para 1.

"demand-side corruption" in fulfilling their duties. That is, public officials will not do their jobs unless given a bribe.

Climate finance has led to some innovative ways of committing corrupt acts.<sup>50</sup> In some instances, research and science are engineered to produce "bad results" which can be used to ensure that individuals profit from business ventures.<sup>51</sup> Manipulations of the greenhouse gas market have also been observed, where carbon pricing is adjusted to accommodate the perpetrator's activities.<sup>52</sup> Systemic climate risks<sup>53</sup> are underplayed to unduly influence the allocation and selection of climate projects.<sup>54</sup> Some public officials even engage in activities to induce climate shocks because of the money involved in disaster and climate management.<sup>55</sup>

This has led to the loss of climate funds, policy capture, undue influence, and creative accounting or reporting.<sup>56</sup> For example, Transparency International reported that the Ministry of Forestry in Indonesia took about six million USD from its Reforestation Fund to finance other politically favoured projects that did not make any contribution to the Fund's objectives.<sup>57</sup> An audit also showed that five billion USD was lost globally as a result of systematic financial mismanagement, fraudulent practices and the routine diversion of climate funds.<sup>58</sup>

Moreover, the impacts of corruption in climate finance are potentially more devastating than those of general public sector corruption. Extensive empirical work was analysed by Leitão<sup>59</sup> to prove that corruption has a direct adverse impact on climate change. Other studies show that corruption in climate finance undermines climate mitigation efforts and reduces the

---

<sup>50</sup> Opoku *et al* 2022 *African Journal on Land Policy and Geospatial Sciences* 601. For more specific detail on the risks within the procurement stages of climate projects, see Kahn *et al* *Climate Change Investments* 11; Butler, Martin and Hogan *Corruption Risks Loom Large* 5.

<sup>51</sup> Opoku *et al* 2022 *African Journal on Land Policy and Geospatial Sciences* 601.

<sup>52</sup> The greenhouse gas market is an economic market where emission trading for greenhouse gasses such as carbon dioxide is a form of carbon pricing. It therefore creates a market that dictates the maximum emission allowances for states, companies and other greenhouse gas producing industries or institutions; Opoku *et al* 2022 *African Journal on Land Policy and Geospatial Sciences* 601.

<sup>53</sup> "A systemic climate risk is triggered by one or more direct risks caused by climate change and then has cascading effects at economic, social, cultural, ecological and political levels. When cascading effects take place, one risk causes one or several risks, which then propagate further". Hui-Min Li *et al* 2021 *Advances in Climate Change Research* 384.

<sup>54</sup> Opoku *et al* 2022 *African Journal on Land Policy and Geospatial Sciences* 601.

<sup>55</sup> Lee and Moumbark 2022 *Finance Research Letters* para 1.

<sup>56</sup> Elges and Martin *Protecting Climate Finance* 4.

<sup>57</sup> Transparency International *Corruption-Free Climate Finance* 6.

<sup>58</sup> Transparency International *Corruption-Free Climate Finance* 6.

<sup>59</sup> Leitão 2021 *Economies* 6. The author used the data sets of eleven different empirical studies.



quality of climate adaptation.<sup>60</sup> Sometimes undue influence leads to the implementation of the wrong type of mitigation or adaptation projects.<sup>61</sup> Lastly, and this is perhaps the most devastating impact, there is corruption's contribution to government recalcitrance. Corruption can be used as a convenient excuse for not providing resources or not demonstrating results, especially when "green" decisions are politically unpopular.<sup>62</sup> This is especially dangerous for countries where public sector corruption is perceived as the "normal" operation of government. The many impacts corruption has on the collective global climate action shows that it should be addressed with urgency, especially since many climate scholars indicate that "there is only one shot at getting it (climate action) right".<sup>63</sup> The governance of general financial management in cities can also be used to prevent corruption in city finance. However, for reasons that are set out below, it could be argued that the climate finance sector is somewhat unique and that traditional anti-corruption approaches might have to be reconsidered and reworked to enhance their effectiveness against corruption in climate finance. It may also be prudent to acknowledge that the climate finance sector is relatively new and therefore not all corruption vulnerabilities may be known yet.

Public finance management in general includes navigating the many vulnerabilities to corruption. These may vary from weaknesses in bureaucratic processes, poor financial management systems, political greed, weak legislation, lack of political will, poor law enforcement to weak judicial systems.<sup>64</sup> Climate finance management as part of public finance, in addition, is accompanied by more vulnerabilities that are new and unique, and that also need to be navigated when implementing climate projects.<sup>65</sup> A brief overview of these vulnerabilities would be beneficial to distinguishing what financial controls would be needed to prevent and control climate corruption.

According to Transparency International, the climate finance sector is in its infancy,<sup>66</sup> and corruption risks are greater where potentially large capital flows take place through untested and new financial markets.<sup>67</sup> In addition to the novel, largely untested nature of the climate finance sector, the actors or combination of actors involved further complicate climate finance management. The climate finance sector is regulated by a complex network

---

<sup>60</sup> Opoku *et al* 2022 *African Journal on Land Policy and Geospatial Sciences* 591, 601; Devine, McCollum and Orlova 2022 *Finance Research Letters* 1.

<sup>61</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 3.

<sup>62</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 3.

<sup>63</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 1.

<sup>64</sup> Lee and Moumbark 2022 *Finance Research Letters* para 3.

<sup>65</sup> Kahn *et al* *Climate Change Investments* 5.

<sup>66</sup> Transparency International *Global Corruption Report* 21.

<sup>67</sup> Transparency International *Global Corruption Report* 21.

of institutions (public and private), which include various levels of governance (international, national, and local).<sup>68</sup> It must also be noted that the institutions involved depend on the specific climate project undertaken.<sup>69</sup> This means that the climate finance management of every project will look different.<sup>70</sup> A risk created by this dynamic is pinpointing responsibility and accountability. The fact that a multitude of interested stakeholders all have some authority in the management of climate finance may increase the risk of conflicts of interest.

Many climate projects require the development of infrastructure.<sup>71</sup> Developing infrastructure means channelling investments into sectors, such as construction and energy, that are notorious for being corrupt.<sup>72</sup> Climate projects channel finances into such sectors on a massive scale.<sup>73</sup> The urgency of the climate crisis further exacerbates the risk of corruption because of the constant pressure to conclude these projects in shorter time frames than those of other projects on the same scale.<sup>74</sup>

Evaluating whether a climate project has done what it set out to do is complex due to a number of factors such as the climate-related criteria that need to be measured by climate scientists.<sup>75</sup> Usually several subcontractors are involved,<sup>76</sup> and the contractual terms may be complex and opaque, making the detection of corruption difficult.<sup>77</sup> The fact that climate projects likely involve new and unfamiliar technologies further contributes to oversight and evaluation difficulties.<sup>78</sup> The social benefits of climate change projects are often delayed, and the adaptation or mitigation value of such projects can only be established when climate related events happen – in the indefinite future.<sup>79</sup> The effects of corruption, such as spending climate finance on low-quality materials, may be undetected until such events occur.

Climate finance can be complex, uncertain and innovative in nature.<sup>80</sup> The diversity created by such a financial landscape may indicate that corruption

---

<sup>68</sup> Kabir *et al* 2021 *Journal of Southwest Jiaotong University* 57.

<sup>69</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 3.

<sup>70</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 3.

<sup>71</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 4; Kabir *et al* 2021 *Journal of Southwest Jiaotong University* 57.

<sup>72</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 4; Kabir *et al* 2021 *Journal of Southwest Jiaotong University* 57.

<sup>73</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 4; Kabir *et al* 2021 *Journal of Southwest Jiaotong University* 57.

<sup>74</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 4; Kabir *et al* 2021 *Journal of Southwest Jiaotong University* 57.

<sup>75</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 6.

<sup>76</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 6.

<sup>77</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 6.

<sup>78</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 6.

<sup>79</sup> Kahn *et al* *Climate Change Investments* 5.

<sup>80</sup> Transparency International *Global Corruption Report* 21.

risks can be project-specific, and anti-corruption efforts tailored to general public finance management may overlook these.<sup>81</sup> Climate projects are often unique to their context, which makes effective cost comparisons with other projects near impossible.<sup>82</sup> Furthermore, some evidence also suggests that there are regulatory grey zones and loopholes that create a risk of exploitation.<sup>83</sup>

It is indicated that a large sum of climate finance globally, is received by developing countries with a history of corruption.<sup>84</sup> In such countries, knowledge of irregularities may not lead to enforcement action where contractors, implementation and enforcement agencies collude.<sup>85</sup> Where corruption is endemic in a country, identifying violations may not yield any benefits. Instead, people may be penalised if they try to enforce the rules against powerful coalitions and networks.<sup>86</sup> When one considers these nuanced risks, it is no surprise that climate finance management remains largely unfortified against corruption.<sup>87</sup>

### **3 Using legal measures to improve climate finance management in cities**

Law can be a vital tool to drive change in a community.<sup>88</sup> If used correctly, laws and policies illustrate the commitment of governments and city authorities to improving financial management.<sup>89</sup> Furthermore, laws and policies may be used to guide the decisions and strategic planning of cities.<sup>90</sup> Some of the financial controls as set out in international and regional law will be discussed below. It should be noted that many of these may overlap and may be co-dependent.

#### **3.1 Financial risk assessments and plans for each climate project**

Financial risk management can be used to prevent financial mismanagement, corruption, and other related maladministration.<sup>91</sup> Financial risk assessment in climate projects is the process whereby stakeholders identify the inherent risks of (including the danger of corruption in) each climate project, including its financial management, that may be

---

<sup>81</sup> Kabir *et al* 2021 *Journal of Southwest Jiaotong University* 57.

<sup>82</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 5.

<sup>83</sup> Transparency International *Global Corruption Report* 21.

<sup>84</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 1.

<sup>85</sup> Kahn *et al* *Climate Change Investments* 12.

<sup>86</sup> Kahn *et al* *Climate Change Investments* 12.

<sup>87</sup> Transparency International *Global Corruption Report* 21.

<sup>88</sup> Matnuh "Law as a Tool of Social Engineering" 118.

<sup>89</sup> Matnuh "Law as a Tool of Social Engineering" 118.

<sup>90</sup> Matnuh "Law as a Tool of Social Engineering" 118.

<sup>91</sup> Article 9(2) of the *United Nations Convention Against Corruption* (2003) (hereafter UNCAC).

obstacles to the achievement of climate change priorities. Such assessments can help support appropriate strategies to avoid or reduce the impact of that risk.<sup>92</sup>

It is arguable then that the planning of climate projects should include a financial risk assessment. This would result in the development of a risk profile that could indicate which measure or combination of measures should be undertaken to mitigate the identified risks. In other words, financial risk assessment would require the city to diagnose the potential for poor or ineffective financial management.

Financial risk assessments might increase risk awareness (and identify the cause of the problem), enhance operations, and improve strategic decision making in cities.<sup>93</sup> In addition, financial risk assessments might address concerns originating from the funding of a climate project, the technologies and sectors involved, the contractual terms or even the expertise required for its implementation.<sup>94</sup> Financial risk assessments could also be used to harmonise the financial rules and procedures, including the procurement requirements, of the different funding institutions involved.<sup>95</sup> This might simplify the implementation of other financial controls such as evaluations and the designation of responsible persons. On the other hand, the success of financial risk assessment depends on strong political leadership in their implementation.<sup>96</sup> This means that where cities are confronted with political instability, unethical or poor leadership, financial risk management policies may not be implemented, and the city is left with financial risk assessments on paper only.

### **3.2 Budgets for climate projects**

Sound financial management (and by implication climate finance management) requires *inter alia* that cities adopt a transparent budgeting procedure<sup>97</sup> and ensure that all public expenditure is in accordance with a valid adopted budget.<sup>98</sup> A budget for a climate project is a formal and binding document which cities use to identify and set out particular climate

---

<sup>92</sup> Alexander 2005 *Journal of Financial Econometrics* 3; Suwanda 2020 *AYER Journal* 36; Aksoy and Asan 2020 *International Journal of Business Ecosystem and Strategy* 10.

<sup>93</sup> Suwanda 2020 *AYER Journal* 38.

<sup>94</sup> See section 2.2.

<sup>95</sup> See section 2.2.

<sup>96</sup> Sullivan, Gouldson, and Webber 2013 *Climate Policy* 526.

<sup>97</sup> The budget is the outcome of a budgeting procedure. Therefore, when the budget as a measure to improve financial management is investigated, one has to look at the procedure preceding it as well. When this process is flawed in terms of accountability, transparency and other ethical considerations, it is likely that the budget itself will not contribute to improved financial management of a city.

<sup>98</sup> Article 9(2) of the UNCAC.

mitigation and adaptation objectives.<sup>99</sup> These objectives are then broken down into implementation actions with the anticipated expenditure linked to each and a statement of how these will be funded.<sup>100</sup> This is the cities' financial plan for a specific period, or a specific climate project, through which the city makes a binding commitment on how the city will raise climate funds and how they will be spent.<sup>101</sup> A budget is important for transparency because it gives the public and other interested parties such as the community, external auditors, and watchdog organisations essential information about what a city plans to do with its money. Cities may even go a step further and use performance budgets which are detailed budgets that set out specific key performance indicators that can simplify evaluation measures and facilitate subsequent accountability.

International and regional legal prescripts for a valid budgetary process have evolved to include participatory budgeting. This should also be adopted for the climate finance management context. Participatory budgeting is a process which, in addition to the normal prescripts,<sup>102</sup> contains an extensive public participation and community ownership element.

Some cities take participatory budgeting as an opportunity to better connect with their communities. For example, in Porto Alegre, Brazil, the budgetary process was modified to give poor and historically disadvantaged or excluded communities the opportunity to be involved in the city's financial decision-making processes.<sup>103</sup> According to the United National Local Government Report,<sup>104</sup> Asunción, Paraguay has experienced much success in its financial management with a participatory budgeting process. It included a minimum of four rounds of public hearings before the adoption of the city budget.<sup>105</sup> The participatory element in their budgeting process made the community aware of where public money was to be spent and what the result should be, which made it easier for the community to hold the city accountable.<sup>106</sup>

---

<sup>99</sup> IMFO *Handbook for Municipal Finance Officers* para E.2.

<sup>100</sup> Majam and Uwizeyimana 2018 *African Journal of Public Affairs* 138; IMFO *Handbook for Municipal Finance Officers* para E.2; Mkhize and Ajam 2006 *Journal of Public Administration* 761.

<sup>101</sup> Majam and Uwizeyimana 2018 *African Journal of Public Affairs* 138.

<sup>102</sup> IMFO *Handbook for Municipal Finance Officers* para E.2; United Cities and Local Governments *Local Government Finance* 52.

<sup>103</sup> IMFO *Handbook for Municipal Finance Officers* para E.2; United Cities and Local Governments *Local Government Finance* 52.

<sup>104</sup> United Cities and Local Governments *Local Government Finance* 52.

<sup>105</sup> Farvacque-Vitkovic and Kopanyi *Municipal Finances* 401; IMFO *Handbook for Municipal Finance Officers* para E.2.

<sup>106</sup> Farvacque-Vitkovic and Kopanyi *Municipal Finances* 401; IMFO *Handbook for Municipal Finance Officers* para E.2.

Not all cities are as successful as the city of Asunción. There are cities where participatory budgeting is not implemented in the true sense, e.g., in cases where the element of participation is reduced to a paper exercise or a tick box activity.<sup>107</sup> In other cases, only a small portion of the budget is actually open for participation.<sup>108</sup> Experience has shown that cities that commit to including public participation in their budgeting process, but do not actually implement it, lose more civic engagement and community interest in local governance (including financial management) than would be the case if they did not have a participation element at all.

Budgets, in essence, are documents which contain forecasts of anticipated expenditure and revenue.<sup>109</sup> This means that the actual amounts that the city will receive in revenue and that the city may spend may differ from those in the budget.

### **3.3 Climate project procurement**

Public procurement is a part of supply chain management which also includes the purchase of the goods and services necessary to implement climate projects.<sup>110</sup> As with all other public infrastructure projects, public procurement has been identified as one of the areas of climate finance management that is especially susceptible to corruption and poor financial management. Corruption risks exist at each specific stage of climate procurement processes. These risks include private interests influencing the selection of which climate projects are undertaken.<sup>111</sup> Climate projects may be designed to be larger or more complex than necessary to mobilise greater illicit profits, or to have deliberate design gaps to ensure that costs can be increased later on.<sup>112</sup> Furthermore, price collusion make take place during the tender phase.<sup>113</sup> When accepting tenders, contracts may be tailored to allow for renegotiating prices or bribes can be used to cut corners such as using lower quality materials.<sup>114</sup> Therefore, the international, and

---

<sup>107</sup> Farvacque-Vitkovic and Kopanyi *Municipal Finances* 401.

<sup>108</sup> In other words, the cities will have a participation process, but a significant portion of the budget that will be spent is not negotiable and no amount of public participation will change this. Farvacque-Vitkovic and Kopanyi *Municipal Finances* 401.

<sup>109</sup> Majam and Uwizeyimana 2018 *African Journal of Public Affairs* 138; IMFO *Handbook for Municipal Finance Officers* para E.2; Mkhize and Ajam 2006 *Journal of Public Administration* 761.

<sup>110</sup> OECD 2022 <https://www.oecd.org/gov/public-procurement/>.

<sup>111</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 6.

<sup>112</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 6.

<sup>113</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 6.

<sup>114</sup> Butler, Martin and Hogan *Corruption Risks Loom Large* 6.

regional law requirements of public procurement processes must also be complied with in climate project procurement.<sup>115</sup>

Public procurement processes must be founded on transparency, competition, objective decision-making criteria, and public participation.<sup>116</sup> This means that cities should in addition to a financial risk assessment and a budget, develop a procurement plan that sets out in detail the procurement processes to be followed in that climate project.<sup>117</sup>

However, the many requirements associated with procurement often result in a relatively complex process, which may place a heavy reporting and administrative burden on cities.<sup>118</sup> The increased awareness of the corruption risks involved in such procurement has also led to a culture in the public sector that focusses on perfect doctrinal compliance (instead of material compliance),<sup>119</sup> with little attention paid to the outcomes or objectives of climate project procurement processes.<sup>120</sup> This means that standards such as value for money may sometimes be compromised for perfect compliance with procurement processes.<sup>121</sup> The additional costs involved in achieving perfect compliance with complex procurement processes may also lead to inefficiency, because this expenditure could have been incurred towards the service or product to be procured.<sup>122</sup> But public procurement processes can also be enhanced and simplified through the use of intelligent information systems, automation, robotics and e-tools.<sup>123</sup>

### **3.4 Intelligent information systems, automation, robotics, and e-tools**

Not many international and regional law and policy instruments have highlighted the need for cities to turn to intelligent information systems, automation, robotics and e-tools (hereafter referred collectively to as

---

<sup>115</sup> Article 9(1) of the UNCAC; Art 5(4) of the *African Union Convention on Preventing and Combating Corruption* (2004) (hereinafter the AUCPCC); Art 10 of the *Arab Convention to Fight Corruption* (2010).

<sup>116</sup> Article 9(1) of the UNCAC; Art 5(4) of the AUCPCC; Art 10 of the *Arab Convention to Fight Corruption* (2010).

<sup>117</sup> LazaroIU *et al* 2020 *Sustainability* 2.

<sup>118</sup> Dale-Clough 2015 *European Journal of Social Science Research* 220. For example, in South Africa the policies which cities have developed for public procurement in supply chain management can be several hundred pages long.

<sup>119</sup> Compliance aimed at achieving outcomes and the objectives of climate project procurement processes.

<sup>120</sup> Dale-Clough 2015 *European Journal of Social Science Research* 220; LazaroIU *et al* 2020 *Sustainability* 2.

<sup>121</sup> LazaroIU *et al* 2020 *Sustainability* 2.

<sup>122</sup> LazaroIU *et al* 2020 *Sustainability* 2.

<sup>123</sup> Nurmandi and Kim 2015 *International Journal of Public Sector Management* 198. Also see para 3.4.

modern technologies) to improve financial management, which includes climate finance management.<sup>124</sup> The African Union particularly mandates the public service and administration in states to use modern technologies to support and improve the delivery of services (which would include financial management).<sup>125</sup> Since city administrations are part of public service and administration, one can argue that this provision is also aimed at cities.<sup>126</sup>

Some intelligent technologies cities have used to modernise financial management include the BOOST and PEFA e-tools. Cities in Kenya, Moldova and Togo have implemented an e-tool called BOOST which digests and analyses financial data to help cities monitor public spending using disaggregated data as collected and stored by the financial management or treasury information systems.<sup>127</sup> Some cities combine BOOST with geo-mapping to depict public spending in specific geographical areas, which places residents in a better position to monitor public expenditure in their area. The World Bank has developed an e-tool called Public Expenditure and Financial Accountability (PEFA) which also assesses the condition of a city's public expenditure.<sup>128</sup> Dakar and Ouagadougou subscribed to this tool in 2009 and 2010 respectively.<sup>129</sup> In addition, PEFA specifically evaluates procurement and financial accountability systems. The overall objective of the PEFA tool is to help cities develop a set of practical actions for reform and capacity building towards improved financial management.<sup>130</sup> Other examples of modern technologies used by cities for improved financial management include online or e-citizen scorecards, e-petitions, e-procurement, and other forms of electronic reporting.<sup>131</sup> This range of tools is specifically designed to enable residents to communicate with the city.

Using intelligent technologies can improve climate finance management because it improves communication between stakeholders, reduces human error, and promotes evidence-based decision making.<sup>132</sup> It has been established that the management of climate funding may be complex because of the various stakeholders and funders involved. It has also been

---

<sup>124</sup> Article 8(2) of the *African Charter on the Values and Principles of Public Service and Administration* (2011); United Cities and Local Governments *Local Government Finance* 381.

<sup>125</sup> Article 8(2) of the *African Charter on the Values and Principles of Public Service and Administration* (2011).

<sup>126</sup> Farvacque-Vitkovic and Kopanyi *Municipal Finances* 401.

<sup>127</sup> Farvacque-Vitkovic and Kopanyi *Municipal Finances* 401.

<sup>128</sup> Farvacque-Vitkovic and Kopanyi *Municipal Finances* 401.

<sup>129</sup> Farvacque-Vitkovic and Kopanyi *Municipal Finances* 401.

<sup>130</sup> Farvacque-Vitkovic and Kopanyi *Municipal Finances* 401.

<sup>131</sup> Nurmandi and Kim 2015 *International Journal of Public Sector Management* 201.

<sup>132</sup> Farvacque-Vitkovic and Kopanyi *Municipal Finances* 401.



said that funders often have their own financial management rules in addition to those of the city. These factors make climate finance management a complex task in terms of tracking funding, communicating essential information and evaluating climate finance expenditure. Intelligent technologies can be used to track climate funds in a way similar to that in which the PEFA tool would, and to simplify communication and evaluation as the BOOST tool would have. Another reason for using modern technologies is that certain decisions in financial management can be automated, which means that the "human factor" is removed. This decreases the risk of abusing processes.<sup>133</sup>

It should be noted that modern technologies rely significantly on information and data, so if records are not kept diligently, the use of many of these e-tools and other technologies will not be productive. To address this issue, New York developed a simplified formal internal framework for the collection and processing of data with an emphasis on integrating operational data which may reside in the disparate databases that may be developed and maintained by separate agencies.<sup>134</sup>

### **3.5 Green fiscal autonomy**

As previously stated, local fiscal autonomy refers to the ability of cities to set their own taxes, raise their own revenues, and make their own expenditure decisions.<sup>135</sup> One could infer from this that green fiscal autonomy for cities would at a minimum allow the city to make expenditure decisions involving climate projects in a set legal framework which would include prescribed budgets and procurement processes. Green fiscal autonomy could include giving cities the authority to borrow money, apply for grants, access international investment markets etc. Strong green fiscal autonomy could also provide enough scope for cities to choose which projects to undertake that would best address the cities' mitigation or adaptation needs. For example, climate funds may be allocated for the city to achieve a climate mitigation objective through clean energy, but the city might be given the scope to decide between wind, solar or hydro energy.

An empirical study done by Slack shows that some cities in Canada are asking for greater fiscal autonomy and to be able to "control their own destiny".<sup>136</sup> Cities would then be able to create a tangible link between the costs and benefits of local climate projects. It is also anticipated that cities

---

<sup>133</sup> Farvacque-Vitkovic and Kopanyi *Municipal Finances* 401.

<sup>134</sup> Farvacque-Vitkovic and Kopanyi *Municipal Finances* 401.

<sup>135</sup> Articles 5, 7(1) 16(2) and 16(5) of the *African Charter on the Values and Principles of Decentralisation Local Governance and Local Development* (2014); Art 34 of the *African Charter on Democracy, Elections and Governance* AU Doc AU/Dec/147/VII (2007).

<sup>136</sup> Slack *How Much Local Fiscal Autonomy Do Cities Have?* 2.

would be more careful in their climate finance management if they were able to make their own green fiscal decisions.<sup>137</sup>

Green fiscal autonomy may lead to more responsible climate finance management under certain circumstances, but it is important to evaluate the internal risks of the city's experiencing financial mismanagement and corruption.<sup>138</sup> Greater green fiscal autonomy and public participation might increase the legitimacy of climate projects amongst communities,<sup>139</sup> but it might also sometimes give corrupt public officials more power over fiscal resources, instead of reducing the corruption risk and limiting the power of such public officials.

### **3.6 Incentives for good climate finance management**

No specific provisions are currently prescribed by international and regional law or policy which mandate state governments to employ this mechanism, but many do require them to use any legislative and other measures to improve financial management in state institutions, and in cities.<sup>140</sup> Incentives are the opposite of "name and shame" measures. One of the purposes of incentives is to publicly give credit to cities which are committed to promoting certain aspirations such as good finance management or acting towards achieving climate change.

Incentives may take different forms, one of which is awards. Globally the AIPH World Green City Award recognises cities that champion initiatives to fulfil local priorities that improve economic, social and environmental resilience.<sup>141</sup> This award gives cities a chance of receiving international recognition and publicity which may promote investments to the city. Some central governments, such as France, have developed a grant for cities in their country to incentivise good finance management.<sup>142</sup> These incentives are geared towards encouraging efficiency and good governance in the financial management of cities.<sup>143</sup> National incentives are often accompanied by a once-off monetary contribution as well, which the city can spend towards achieving more of its priorities. All these incentives stipulate certain targets and criteria which cities should meet before they are eligible to receive them.

---

<sup>137</sup> Slack *How Much Local Fiscal Autonomy Do Cities Have? 2*.

<sup>138</sup> See section 3.1.

<sup>139</sup> See section 3.2.

<sup>140</sup> Article 9 of the UNCAC.

<sup>141</sup> AIPH 2023 <https://aiph.org/green-city/green-city-awards/#:~:text=The%20awards%20celebrate%20innovation%2C%20achievement,the%20major%20challenges%20facing%20cities.>

<sup>142</sup> United Cities and Local Governments *Local Government Finance* 52.

<sup>143</sup> United Cities and Local Governments *Local Government Finance* 52.

Central governments, funders, stakeholders and other global institutions such as the World Bank and the World Economic Forum may use a combination of the above two methods to promote good climate financial management. This incentive could offer an award in the form of recognition, provide publicity on popular investors' forums, attract financial contributions and donations of equipment, and provide opportunities to connect with other leading cities. However, they should never be used to exclude struggling cities from accessing capacity building, peer learning and other opportunities for improving their city governance.

Incentives may place a significant administrative demand on cities in terms of reporting and record keeping.<sup>144</sup> Developing and establishing these incentives may also be a complex and tedious process which would require complete and detailed databases with reliable information on the city's financial management issues for successful implementation.<sup>145</sup> This is so because in deciding which cities are eligible for incentives, central governments should be able to make national comparisons, city classifications and indexes.<sup>146</sup>

### **3.7 Tax credits and non-monetary private investments to climate projects**

Tax credits or incentives involve discounts which cities may give on certain taxes and rates if the resident participated in or made a contribution to a specific climate change project.<sup>147</sup> Non-monetary private investments involve private businesses, residents, or other private sector stakeholders offering their professional services for free or making certain other donations to the city.<sup>148</sup> Both tax credits and non-monetary private investments have value, but they deplete the money that reaches the city's treasury.

Cities in Bangladesh rely on their use of tax credits to reduce corruption and achieve climate change objectives.<sup>149</sup> Some cities in Bangladesh have gone so far as to reward with tax credits citizens who monitor certain areas of governance in the city, such as financial management.<sup>150</sup> This measure has contributed significantly towards improving the governance of climate change projects in Bangladesh cities who often grapple with the poor enforcement of financial management rules and rife corruption.

---

<sup>144</sup> United Cities and Local Governments *Local Government Finance* 52.

<sup>145</sup> United Cities and Local Governments *Local Government Finance* 52.

<sup>146</sup> United Cities and Local Governments *Local Government Finance* 52.

<sup>147</sup> Amirtahmasebi *et al* *Regenerating Urban Land* 57.

<sup>148</sup> Wheeler 2008 *Journal of the American Planning Association* 487; Rosenzweig *et al* 2010 *Nature* 909; Tall *et al* *Enabling Private Investment* 14.

<sup>149</sup> Kahn *et al* 2022 *Climate and Development* 921.

<sup>150</sup> Kahn *et al* 2022 *Climate and Development* 921.

In South Africa, tax credits were successfully used by the City of Johannesburg to promote urban regeneration.<sup>151</sup> It led to a surge in real estate investments in the centre of the city, which used to house a concentration of dilapidated buildings.<sup>152</sup> This shows that tax credits, if correctly formulated and implemented, can yield promising results for a city in achieving a specific purpose such as the implementation of climate change projects, while also reducing the risk of corruption and financial maladministration.

Tax credits can thus be seen as an effective measure for cities to implement climate change projects, but it should be kept in mind that this measure is dependent on strong fiscal autonomy. Furthermore, tax credits will require some administrative work on the part of the city to determine exactly how they will be implemented: Will taxpayers have to apply for the tax credit? Will any inspections have to take place by city officials? The administration of tax credits may therefore place additional strain on cities with limited administrative capacity.

### **3.8 Limiting the responsibility for public spending to specific person(s)**

One of the biggest challenges in climate finance management is the number of stakeholders involved, all of whom bear some degree of responsibility in taking decisions involving change climate projects.<sup>153</sup> Some financial plans and agreements do not provide sufficient clarity on the assignment of the responsibility for expenditure on the project. Even in cases where different city officials' responsibilities are reasonably well defined, other expenditure challenges may exist where the responsibilities of external stakeholders, such as international funders, are not defined.<sup>154</sup> In other instances, difficulties arise through the lack of developed methods, practices, and guides to translate the assignment of expenditure responsibilities into quantifiable resource needs. Lastly, sharing fiscal decision-making power with different entities may make it difficult to identify the persons with fiscal responsibility.

In these situations the main concern relates to not being able to identify the person who should ultimately be held accountable if financial mismanagement or corruption has been identified in climate finance.<sup>155</sup> To remedy this, the city has to clearly delineate all stakeholders' duties,

---

<sup>151</sup> Amirtahmasebi *et al Regenerating Urban Land* 57.

<sup>152</sup> Amirtahmasebi *et al Regenerating Urban Land* 57.

<sup>153</sup> See section 2.2.

<sup>154</sup> See section 2.2.

<sup>155</sup> United Cities and Local Governments *Local Government Finance* 17; Kabir *et al* 2021 *Journal of Southwest Jiaotong University* 57.

including those of external institutions.<sup>156</sup> The aim should be to simplify the task in establishing exactly who is responsible for which decisions in the climate project and in so doing to promote accountability. Pinpointing who is responsible would not be sufficient to control corruption. Therefore cities must ensure that when delineating stakeholders' duties, appropriate enforcement mechanisms are also put in place. Such enforcement mechanisms may range from administrative fines or disciplinary action to criminal penalties.

For example, Chitembo<sup>157</sup> shows that in Zambia it is difficult to assign specific expenditure responsibilities to only one level of government, let alone to a specific or determinable person, because of the nature of some of the public services. The same could be said of South Africa. Certain services in these countries such as roads require multiple government stakeholders to cooperate to provide the service.<sup>158</sup> Moreover, some government structures have a strong emphasis on intergovernmental cooperation, where it is expected that different government stakeholders should support one another and share responsibility in the provision of all public services.<sup>159</sup> As stated above, other institutions providing financial aid, such as the World Bank, may also be involved in the financial management of a climate project, a fact which may add another level of complexity when establishing who is responsible for what.<sup>160</sup> Despite such challenges, it could be argued that when financial management in climate projects is divided into the different decisions that make up this process, it will be possible to delineate the responsibility for expenditure with sufficient clarity to identify the responsible public officials.<sup>161</sup>

On the other hand, because of the unique contexts every city and every climate project operate in, it may not be possible for a central government to prescribe these responsibilities.<sup>162</sup> City structures differ from one another, and climate projects are unique. This means that each city will have to develop its own policy, sometimes for each climate project, that sets out the different fiscal decisions which must be taken in its financial management and the person(s) responsible for such decisions.<sup>163</sup> Furthermore, this will

---

<sup>156</sup> United Cities and Local Governments *Local Government Finance* 17; Kabir *et al* 2021 *Journal of Southwest Jiaotong University* 57.

<sup>157</sup> Chitembo *Manual for Local Government Financial Management* 8.

<sup>158</sup> Chitembo *Manual for Local Government Financial Management* 8.

<sup>159</sup> Chitembo *Manual for Local Government Financial Management* 8.

<sup>160</sup> See section 2.1.

<sup>161</sup> Kabir *et al* 2021 *Journal of Southwest Jiaotong University* 57; Chitembo *Manual for Local Government Financial Management* 8.

<sup>162</sup> United Cities and Local Governments *Local Government Finance* 17; Kabir *et al* 2021 *Journal of Southwest Jiaotong University* 57.

<sup>163</sup> United Cities and Local Governments *Local Government Finance* 17; Kabir *et al* 2021 *Journal of Southwest Jiaotong University* 57.

require all stakeholders involved in evaluation processes, especially external auditors, to first establish these intricacies before an audit can be conducted and before any person can be held accountable.

#### **4 Conclusion**

Because of the urgency of the global climate crisis, the disproportionate effects it has on cities, and the scarcity of climate funds, this article has set out to explore some financial controls, as found in international and regional law, which could help to maximise the impact of climate funding in cities. The article found and discussed eight measures that may improve climate finance management in cities. The implementation of the measures does not rely on cities alone, but may require the cooperation of central governments, external funders, communities and global organisations such as the World Bank for optimal effectiveness against corruption and financial mismanagement.

For better the better management of climate finance, each climate project should begin with a financial risk assessment. This may be done by the city and the relevant funders of the specific project. Each climate project must have a clear budget and procurement process. The development of financial risk assessments, budgets and procurement processes should be seen as a valuable opportunity to harmonise the financial management rules and policies of all the different funders and stakeholders involved in the climate project. The evaluation and monitoring of a climate project's financial management would be simplified if the responsibility for different climate finance management decisions were limited to specified persons. This can also be done during the financial risk assessment and project planning stages.

Green fiscal autonomy would allow cities to make use of other financial controls, such as tax credits, which could minimise the cash flow in cities rife with corruption. The use of modern technologies could also remove the "human" factor from certain decisions in climate projects that are often vulnerable to corruption. In addition, such technologies could simplify some of the complexities that arise in the climate finance sector. Lastly, stakeholders such as national governments and global organisations could offer incentives for good climate finance management as a form of positive enforcement.

Despite the existence of financial controls set out above and the pivotal role law and policy may play in financial management, it must be noted that law and policy have limited potential in terms of what they can achieve. One can therefore not rely on law and policy as the only tools for addressing corruption in municipal financial management. Such mechanisms must still

be accompanied by appropriate enforcement measures and political will to be effective.

## **Bibliography**

### **Literature**

Aksoy and Asan 2020 *International Journal of Business Ecosystem and Strategy*

Aksoy T and Asan YE "Assessing Financial Risk Management in Local Governments: Case of Istanbul Metropolitan Municipality" 2020 *International Journal of Business Ecosystem and Strategy* 10-23

Alexander 2005 *Journal of Financial Econometrics*

Alexander C "The Present and Future of Financial Risk Management" 2005 *Journal of Financial Econometrics* 3-25

Amirtahmasebi *et al Regenerating Urban Land*

Amirtahmasebi R *et al Regenerating Urban Land: A Practitioner's Guide to Leveraging Private Investment* (World Bank Washington DC 2016)

Butler, Martin and Hogan *Corruption Risks Loom Large*

Butler C, Hogan S and Martin D *Corruption Risks Loom Large over Financing of Green Infrastructure* (Petersen Institute for International Economics Washington DC 2022)

Chitembo *Manual for Local Government Financial Management*

Chitembo A *A Manual for Local Government Financial Management in Zambia* (Institute for Housing and Urban Development Studies Rotterdam 2002)

Colenbrander *et al Financing Low-Carbon, Climate-Resilient Cities*

Colenbrander S *et al Financing Low-Carbon, Climate-Resilient Cities* (Coalition for Urban Transitions London 2018)

Dale-Clough 2015 *European Journal of Social Science Research*

Dale-Clough L "Public Procurement of Innovation and Local Authority Procurement: Procurement Modes and Framework Conditions in Three European Cities" 2015 *European Journal of Social Science Research* 220-242

Devine, McCollum and Orlova 2022 *Finance Research Letters*

Devine A, McCollum M and Orlova S "Cleaning Up Corruption and the Climate: The Role of Green Building Certifications" 2022 *Finance Research Letters* 1-7

Doku 2021 *European Journal of Development Research*

Doku I "Are Developing Countries Using Climate Funds for Poverty Alleviation? Evidence from Sub-Saharan Africa" 2021 *European Journal of Development Research* 3026-3049

Elges and Martin *Protecting Climate Finance*

Elges L and Martin C *Protecting Climate Finance: An Anti-Corruption Assessment of the Adaptation Fund* (Transparency International Berlin 2013)

Farvacque-Vitkovic and Kopanyi *Municipal Finances*

Farvacque-Vitkovic C and Kopanyi M (eds) *Municipal Finances: A Handbook for Local Governments* (World Bank Group Washington DC 2014)

Gonzales-Limón, Pablo-Romero and Sanchez-Braza 2013 *Energy*

Gonzales-Limón JM, Pablo-Romero MP and Sanchez-Braza A "Understanding Local Adoption of Tax Credits to Promote Solar-Thermal Energy: Spanish Municipalities' Case" 2013 *Energy* 277-284

Gordon 2013 *Canadian Foreign Policy Journal*

Gordon DJ "Between Local Innovation and Global Impact: Cities, Networks, and the Governance of Climate Change" 2013 *Canadian Foreign Policy Journal* 288-307

Hui-Min Li *et al* 2021 *Advances in Climate Change Research*

Hui-Min Li *et al* "Understanding Systemic Risk Induced by Climate Change" 2021 *Advances in Climate Change Research* 384-394

Hunt and Watkiss 2011 *Climatic Change*

Hunt A and Watkiss P "Climate Change Impacts and Adaptation in Cities: A Review of the Literature" 2011 *Climatic Change* 13-49

IMFO *Handbook for Municipal Finance Officers*

Institute of Municipal Finance Officers *Handbook for Municipal Finance Officers* (Institute of Municipal Finance Officers Kempton Park 2010)

Kabir *et al* 2021 *Journal of Southwest Jiaotong University*

Kabir MR *et al* "Corruption Possibilities in the Climate Financing Sector and Role of the Civil Societies in Bangladesh" 2021 *Journal of Southwest Jiaotong University* 55-64

Kahn *et al* 2022 *Climate and Development*

Kahn M *et al* "Win-Win: Designing Dual-Use in Climate Projects for Effective Anti-Corruption in Bangladesh" 2022 *Climate and Development* 921-934



Kahn *et al* *Climate Change Investments*

Kahn M *et al* *Climate Change Investments in Bangladesh: Leveraging Dual-Use Characteristics as an Anti-Corruption Tool* (Transparency International Bangladesh Dhaka 2020)

Lazaroiu *et al* 2020 *Sustainability*

Lazaroiu G *et al* "Environmentally Responsible Behaviour and Sustainability Policy Adoption in Green Public Procurement" 2020 *Sustainability* 1-12

Lee and Moumbark 2022 *Finance Research Letters*

Lee H and Moumbark T "Climate Change, Corruption and Business Bribes in South Asia" 2022 *Finance Research Letters*  
<https://doi.org/10.1016/j.frl.2022.102685>

Lehtinen *et al* 2022 *International Journal of Project Management*

Lehtinen J *et al* "The Grand Challenge: Effective Anti-Corruption Measures in Projects" 2022 *International Journal of Project Management* 347-361

Leitão 2021 *Economies*

Leitão NC "The Effects of Corruption, Renewable Energy, Trade and CO<sub>2</sub> Emissions" 2021 *Economies* 1-19

Majam and Uwizeyimana 2018 *African Journal of Public Affairs*

Majam T and Uwizeyimana DE "Aligning Economic Development as a Priority of the Integrated Development Plan to the Annual Budget in the City of Johannesburg Metropolitan Municipality" 2018 *African Journal of Public Affairs* 138-166

Matnuh "Law as a Tool of Social Engineering"

Matnuh H "Law as a Tool of Social Engineering" in 1<sup>st</sup> International Conference on Social Sciences Education *Advances in Social Science, Education and Humanities Research* (November 2017) 118-120

Mkhize and Ajam 2006 *Journal of Public Administration*

Mkhize N and Ajam T "The New Budgeting Approach in South Africa: A Critical Assessment" 2006 *Journal of Public Administration* 761-775

Negreiros *et al* *The State of Cities Climate Finance*

Negreiros P *et al* *The State of Cities Climate Finance: The Landscape of Urban Climate Finance* (Climate Policy Initiative San Francisco 2021)

Nurmandi and Kim 2015 *International Journal of Public Sector Management*

Nurmandi A and Kim S "Making E-Procurement Work in a Decentralised Procurement System: A Comparison of Three Indonesian Cities" 2015 *International Journal of Public Sector Management* 198-220

*OECD Cities and Climate Change*

Organisation for Economic Co-operation and Development *Cities and Climate Change: Policy Perspectives on National Governments Enabling Local Action* (OECD Paris 2014)

*OECD Fiscal Autonomy of Sub-Central Governments*

Organisation for Economic Co-operation and Development *The Fiscal Autonomy of Sub-Central Governments: An Update* (OECD Network on Fiscal Relations Across Levels of Government Paris 2009)

Opoku *et al* 2022 *African Journal on Land Policy and Geospatial Sciences*

Opoku P *et al* "Political Economy Analysis of How Corruption Affects Climate Change Adaptation and Mitigation: A Case Study of the Forest and Land Use Sectors of Ghana" 2022 *African Journal on Land Policy and Geospatial Sciences* 594-610

*Patel Funding for Adaptation to Climate Change*

Patel T *Funding for Adaptation to Climate Change: The Case of Surat* (PhD-thesis Massachusetts Institute of Technology 2014)

*Reddy et al Local Government Climate Change Support Programme*

Reddy Y *et al The Local Government Climate Change Support Programme in South Africa* (Sustainable Energy Africa Berlin 2021)

*Rosenzweig et al 2010 Nature*

Rosenzweig C *et al "Cities Lead the Way in Climate-Change Action"* 2010 *Nature* 909-911

*Slack How Much Local Fiscal Autonomy Do Cities Have?*

Slack E *How Much Local Fiscal Autonomy Do Cities Have? A Comparison of Eight Cities around the World* (Institute on Municipal Finance and Governance Toronto 2017)

*Sullivan, Gouldson, and Webber 2013 Climate Policy*

Sullivan R, Gouldson A and Webber P "Funding Low Carbon Cities: Local Perspectives on Opportunities and Risks" 2013 *Climate Policy* 514-529

*Suwanda, 2020 AYER Journal*

Suwanda D "Risk Management Solutions in Local Government Management" 2020 *AYER Journal* 34-81

*Tall et al Enabling Private Investment*

Tall AL *et al Enabling Private Investment in Climate Adaptation and resilience* (World Bank Group Washington DC 2021)

*Transparency International Corruption-Free Climate Finance*

Transparency International *Corruption-Free Climate Finance: Strengthening Multilateral Funds* (Transparency International Berlin 2022)

Transparency International *Global Corruption Report*  
Transparency International *Global Corruption Report: Climate Change a User's Guide* (Transparency International Berlin 2011)

United Cities and Local Governments *Local Government Finance*  
United Cities and Local Governments *Local Government Finance: The Challenges of the 21st Century* (Edward Elgar Cheltenham 2010)

Wheeler 2008 *Journal of the American Planning Association*  
Wheeler SM "State and Municipal Climate Change Plans: The First Generation" 2008 *Journal of the American Planning Association* 481-496

World Bank *Cities and Climate Change*  
World Bank *Cities and Climate Change: An Urgent Agenda* (World Bank Group Washington DC 2011)

Wright *Legal Perspectives*  
Wright J *Legal Perspectives on the Prevention and Minimisation of Corruption for Sustainability in South African Municipalities* (PhD-thesis North-West University 2021)

Zhifu *et al* 2019 *Journal of Cleaner Production*  
Zhifu M *et al* "Cities: The Core of Climate Change Mitigation" 2019 *Journal of Cleaner Production* 582-589

### **National law**

*Division of Revenue Act 5 of 2022*

### **International law**

*African Charter on Democracy, Elections and Governance* AU Doc AU/Dec/147/VII (2007)

*African Charter on the Values and Principles of Decentralisation Local Governance and Local Development* (2014)

*African Charter on the Values and Principles of Public Service and Administration* (2011)

*African Union Convention on Preventing and Combating Corruption* (2004)

*Arab Convention to Fight Corruption* (2010)

*United Nations Convention against Corruption* (2003)

### **Internet sources**

AIPH 2023 <https://aiph.org/green-city/green-city-awards/#:~:text=The%20awards%20celebrate%20innovation%2C%20achievement,the%20major%20challenges%20facing%20cities>

AIPH 2023 *World Green City Awards* <https://aiph.org/green-city/green-city-awards/#:~:text=The%20awards%20celebrate%20innovation%2C%20achievement,the%20major%20challenges%20facing%20cities> accessed 15 March 2023

C40Cities 2022 [https://www.c40knowledgehub.org/s/article/Six-effective-ways-for-cities-to-invest-in-climate-action?language=en\\_US](https://www.c40knowledgehub.org/s/article/Six-effective-ways-for-cities-to-invest-in-climate-action?language=en_US)

C40Cities 2022 *Six Ways for Cities to Drive Climate Investment* [https://www.c40knowledgehub.org/s/article/Six-effective-ways-for-cities-to-invest-in-climate-action?language=en\\_US](https://www.c40knowledgehub.org/s/article/Six-effective-ways-for-cities-to-invest-in-climate-action?language=en_US) accessed 15 March 2023

C40 Cities 2023 <https://www.c40.org/about-c40/>

C40 Cities 2023 *About C40* <https://www.c40.org/about-c40/> accessed 28 February 2023

Climate Policy Initiative 2022 <https://www.climatepolicyinitiative.org/the-topics/blended-finance>

Climate Policy Initiative 2022 *Blended Finance* <https://www.climatepolicyinitiative.org/the-topics/blended-finance/> accessed 28 February 2023

DPLG 2004 <https://www.cogta.gov.za/mig/docs/3.pdf>

Department of Provincial and Local Government 2004 *The Municipal Infrastructure Grant 2004-2007* <https://www.cogta.gov.za/mig/docs/3.pdf> accessed 28 February 2023

OECD 2022 <https://www.oecd.org/gov/public-procurement/>

Organisation for Economic Co-operation and Development 2022 *Public Procurement* <https://www.oecd.org/gov/public-procurement/> accessed 28 February 2023

United Nations Climate Change 2022 <https://bit.ly/3A3RVCE>

United Nations Climate Change 2022 *Introduction to Climate Finance* <https://bit.ly/3A3RVCE> accessed 28 February 2023

## List of Abbreviations

AF	Adaptation Fund
AUCPCC	African Union Convention on Preventing and Combating Corruption (2004)
DPLG	Department of Provincial and Local Government
IMFO	Institute of Municipal Finance Officers
LDCF	Least Developed Country Fund
OECD	Organisation for Economic Co-operation and Development

---

PEFA	Public Expenditure and Financial Accountability
SCCF	Special Climate Change Fund
SCCFR	State of Cities Climate Finance Report
UN	United Nations
UNCAC	United Nations Convention against Corruption (2003)