

# A policy content analysis for evaluating urban adaptation justice in İstanbul

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**Key Words:** Policy Content Analysis, Vulnerability, Urban Climate Justice, Adaptation, Urban Inequality, İstanbul

### **Abstract:**

Climate change is disproportionately affecting vulnerable communities, increasing existing risks and leading to further global inequalities. Drawing on the concept of urban adaptation justice, we evaluated the inclusion of vulnerable communities in the climate change adaptation planning process of İstanbul, a European coastal megacity with considerable vulnerability to climate change. For this, a policy content analysis structured around four criteria: (i) participation, (ii) capacity enhancement, (iii) governance, and (iv) justice integration into spatial planning, was carried out and supplemented by local expert consultations. Our findings indicate that while the objective of incorporating some aspects of justice in adaptation planning was recognized, there was a distinct lack of specific actions or evaluation tools. The expert consultations largely confirmed these findings, which were then connected to the socio-historical and political context of İstanbul and the wider Turkish region. Key conclusions include the failure of current adaptation policies to adequately consider vulnerabilities arising from a combination of urban marginalization interacting with neoliberal authoritarianism. We identify the need for understanding and integrating equitable climate change adaptation as a key dimension of urban decision-making for future policy-relevant research and practice.

### **1. Introduction**

While the likelihood of remaining below the threshold of 1.5°C global warming set out in the Paris Agreement diminishes, recent evidence suggests that climate impacts are already experienced by vulnerable communities in the form of increasingly frequent and intense climate-induced extreme events. Home to over half of the world’s population, urban areas have been prioritised as key for climate change adaptation (Reckien et al. 2017; Bulkeley and Castán Broto 2013; Bulkeley et al. 2014; Bai et al. 2018). Particularly urban areas in coastal regions will be highly susceptible to the impacts of climate change due in part to sea-level rise and changing coastal climate systems, as well as the impacts of urbanisation and establishment of human settlements in environmentally hazardous areas (IPCC, 2022; Olazabal et al. 2019; Abadie et al. 2016). It is for these reasons that urban populations without sufficient resources to adequately respond are considered the most vulnerable societal groups to climate change impacts (IPCC, 2022; Bai et al., 2018; Chu et al. 2017; Satterthwaite et al., 2020).

To redress social vulnerability in just ways, urban climate change adaptation efforts depend on (i) participation, (ii) capacity enhancement, (iii) governance, and (iv) justice integration into spatial planning (Shi et al., 2016). While there are recent efforts to

92 assess equity and justice in urban resilience and sustainability planning (Chu &  
93 Cannon, 2021; Fitzgibbons & Mitchell, 2019; Hess & McKane, 2021; Westman & Broto,  
94 2021; Ziervogel et al., 2017), and more particularly in urban adaptation planning (Fiack  
95 et al., 2021), few studies develop structured and replicable evaluations of the degree in  
96 which justice is considered in urban adaptation planning processes.

97  
98 The objective of this research was to explore and assess urban justice in adaptation  
99 planning using the case study of İstanbul, a coastal megacity at the interface of intense  
100 urbanisation dynamics and significant exposure to climate change impacts. This was  
101 examined by conducting a policy content analysis of municipal and national policy  
102 documents relevant for climate change adaptation, which was then supplemented with  
103 data from expert consultations. Given the city's increased impetus in becoming an  
104 active part of transnational local climate networks, this research aims to make a timely  
105 contribution to the growing body of knowledge in urban adaptation justice from the  
106 perspective of a megacity in the Global South, particularly around facilitating the  
107 inclusion of vulnerable communities in adaptation planning (Wilson et al. 2020;  
108 Ziervogel et al. 2021).

## 111 **2. Urban adaptation justice**

112  
113 Urban adaptation justice is closely related to the concept of climate justice, itself  
114 stemming from the idea that the cumulative historical responsibilities for the causes of  
115 climate change need to be accounted for (Schlosberg and Collins, 2014). The  
116 proliferation of extractivist economies since the colonial era has led to a destabilization  
117 of the earth's climate system, the impacts of which are enhancing the urgency of  
118 adaptation (IPCC, 2022), defined as “*the need for a socio-ecological systems response*  
119 *to actual and expected impacts of climate change*” (Moser and Ekstrom, 2010). If  
120 climate change responses fail to consider these already existing inequalities, they will  
121 most likely fall into the trap of further enhancing those inequalities and produce  
122 maladaptive outcomes (Eriksen et al., 2020). In order to offer a just alternative,  
123 adaptation options must adhere to the three components of climate justice, a)  
124 distributional justice, referring to spatial and temporal distribution of burdens and  
125 benefits amongst individuals, communities and nations, b) procedural justice,  
126 implying the need for a democratization of climate-related decision-making and policy  
127 planning processes, and c) recognition, emphasizing basic respect and fair engagement  
128 and consideration of a multitude of cultures and viewpoints (IPCC, 2022). These  
129 components are inherently linked to the structural factors influencing vulnerability in  
130 cities.

131  
132 Urban marginalization, understood as the unequal access to the formal economy and  
133 urban infrastructure (Cahyani and Widaningsih, 2019), , not only determines and  
134 enhances vulnerability to climate change impacts (Shi et al., 2016), but is augmented  
135 and compounded by climate change dynamics (Hallegatte and Rozenberg, 2017; Schell  
136 et al., 2020). Hence, the contribution of unequal socioeconomic structures to the  
137 underlying drivers of climate injustice needs to be further understood (Chu & Cannon,  
138 2021).

139  
140 How urban climate action is framed and developed is also important when  
141 conceptualising equity and justice issues. Recent research points to the need of further

142 assessing the effect of adaptation actions, as they may generate new vulnerabilities or  
143 redistribute existing ones (Eriksen et al., 2020). This suggests that further efforts in  
144 assessing the potential maladaptive outcomes of urban adaptation plans are necessary.  
145 For example, top-down climate urbanism approaches that overlook locally situated  
146 vulnerabilities may reproduce urban injustices when they focus on technological  
147 solutions rather than framing action according to local needs (Long and Rice, 2019;  
148 Robin and Broto, 2020).

149  
150 If the ultimate goal is to challenge and redress underlying drivers of vulnerability,  
151 adaptation needs to be inherently transformative (Roberts and Pelling, 2020; Wilson  
152 et al., 2020). There is no uniform definition of adaptation success, and questions  
153 pertaining to who should be the recipients of adaptation or what must be adapted to,  
154 are inherently dependent on local context (Dilling et al., 2019). However, justice-  
155 oriented frameworks can help shed light on different components of just adaptation.  
156 Along this line, for the purposes of this study, key criteria for assessing the extent of  
157 urban adaptation justice and guiding decision-makers and policy planners as proposed  
158 by Shi et al., (2016) were operationalized.

## 159 160 **2.1 Urban adaptation justice criteria**

161  
162 The first criterion of urban adaptation justice in Shi et al's (2016) framing is  
163 meaningful participation. Those affected by climate change risk are best placed to  
164 develop appropriate responses. The integration of local subaltern knowledge into  
165 decision-making has been identified as a key component to boost urban adaptation  
166 globally (Olazabal et al., 2021). However, there is no silver-bullet to effectively  
167 integrate local knowledge into adaptation planning and decision-making processes as  
168 adaptation requires the combination of multiple potentially conflicting knowledge  
169 systems (Olazabal et al., 2021). Participatory processes can help integrate local  
170 knowledge, further enabling dialogue and learning, legitimizing outcomes and  
171 facilitating implementation (Norström et al., 2020).

172  
173 The second criterion is capacity enhancement and catalyzing action. Constraints in  
174 adaptive capacity are seen as a critical barrier for implementing climate change  
175 adaptation (IPCC, 2018). Adaptive capacity is understood as the availability and  
176 accessibility of resources and capabilities which determine effective climate change  
177 adaptation outcomes (Adger et al. 2005; Sen 1997). Political leadership and vision,  
178 institutional capacity and financial resources can facilitate proactive adaptation at the  
179 municipal level (Shi et al., 2016). Technical expertise is particularly important to  
180 interpret data for climate-related decision-making and policy planning (Lemos et al.  
181 2012; Brasseur and Gallardo 2016).

182  
183 The third criterion is multilevel and multiscale governance. While climate change is  
184 largely governed at the national and international level, the manifestations of  
185 vulnerability play out at the sub-national and municipal level (Williams, 2020),  
186 contributing to the perception that regulating climate change adaptation is  
187 predominantly a local issue (Rosendo et al. 2018). However, this risks to neglect the  
188 intrinsic dependency of local action on multilevel cooperation (Nalau et al. 2014;  
189 Morgan et al. 2019), and regulatory authority and revenue assignment represent only  
190 two of a myriad of tensions embedded within local and national governments (Shi et  
191 al., 2016). Hence, any assessments of adaptation practice should be conducted through

192 the sphere of multilevel governance, meaning both the local and the national level  
193 require consideration (Di Gregorio et al., 2019), as well as multiple external actors  
194 forming partnerships with nongovernmental organizations, research institutions, and  
195 community initiatives (Ostrom, 2010; Williams, 2020; Sovacool, 2013).

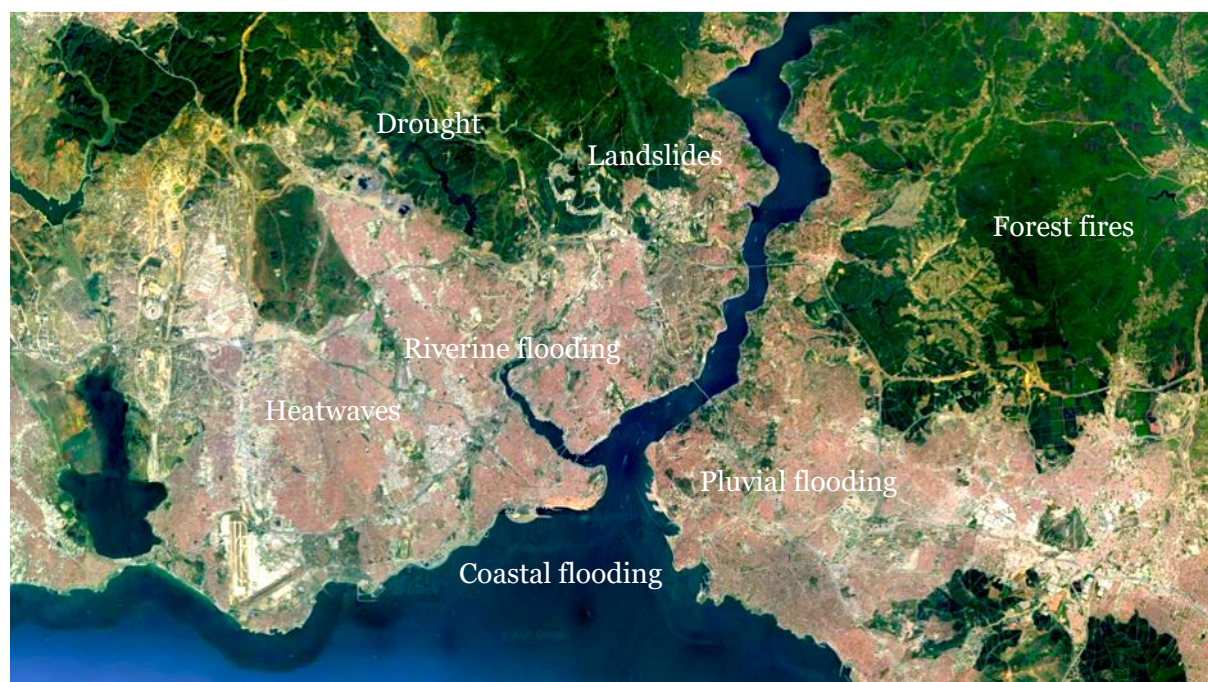
196  
197  
198  
199 The fourth and final criterion is adaptation justice integration in spatial planning. The  
200 impacts of large-scale infrastructure projects on vulnerable communities are seldom a  
201 priority, if a criteria of interest at all (Anguelovski et al., 2016). For justice integration  
202 into spatial planning processes, adaptation researchers and civil society  
203 representatives of vulnerable communities need to be involved for embedding  
204 environmental or social justice criteria into adaptation projects (Shi et al., 2016). This  
205 could offer a response to rapid urbanisation and competing pressures for urban  
206 resources leading to the establishment of human settlements on land sensitive to  
207 climate impacts (Dupont et al., 2016). Otherwise there is a risk of maladaptive physical  
208 measures creating displacement or enhancing inequality and vulnerability to climate  
209 change impacts (Eriksen et al., 2020; Shi et al., 2016).

210  
211 In the following section, the four-fold roadmap suggested by Shi et al. (2016) is  
212 operationalized by applying it as an analytical framework to explore and understand  
213 the justice considerations in Istanbul’s adaptation planning.

214  
215

### 216 **3. Climate change and urbanisation in İstanbul**

217  
218 İstanbul has been identified as the most vulnerable city to coastal climate change  
219 impacts in Europe (Abadie et al. 2016). Frequent heatwaves, reduced annual  
220 precipitation, changes in seasonal climate, and a transition from semi-humid to semi-  
221 dry and dry conditions have already been observed in the eastern Mediterranean over  
222 the past 40 years (Şahin, 2016). Local manifestations of climate impacts include urban  
223 heat islands, heat waves and flash floods (Yazar and York, 2021). Further observed and  
224 projected climate change impacts include pluvial, coastal, and riverine flooding, ,  
225 droughts, and forest fires. Moreover, a recent study found that “*climate change will*  
226 *have a strong impact on Istanbul from 2030 onwards and become more intense after*  
227 *2040 [...] which will challenge Istanbul’s long term water security*” (Daloğlu  
228 Çetinkaya et al., 2022) .



229  
230 *Figure 1 Anticipated climate change impacts in different parts of İstanbul (Google Earth,*  
231 *2020; Ministry of Environment and Urbanization, 2011; Onur and Tezer, 2015)*

232 Located in the eastern Mediterranean region with significant geographical and  
233 strategic importance, the city experienced rapid urban growth from 1.1 million in 1945  
234 to 4.75 million in 1980, and in the years from 1995 to 2002 was the fastest growing city  
235 in all OECD (Organisation for Economic Co-operation and Development) metropolitan  
236 areas (Keyder, 2018). Following the major economic crisis in 2001, the Justice and  
237 Development Party (AKP) rose to power in 2002 under the initial promise of  
238 democratization and decentralization. Embracing an economic agenda that involved  
239 the integration of the city into the global neoliberal economic regime, the urban agenda  
240 was characterised by regulations and policies to assist infrastructural services,  
241 construction, tourism and cultural investment (Balaban & Balaban, 2015; Cabannes &  
242 Göral, 2020; Canitez et al. 2020).

243  
244 The strong political will for a rapid transformation into a “*global city*” was supported  
245 by a dominant economic growth paradigm which significantly impacted urban  
246 development processes and resulted in strong social inequalities, primarily  
247 experienced through spatial segregation, as well as social and economic  
248 marginalization (Adaman et al., 2017). Even though this dominant economic growth  
249 paradigm does not represent a fundamental shift from earlier periods in terms of the  
250 primacy of economic growth, it took a distinctly neoliberal character under AKP rule  
251 and became the basis of its electoral success (Adaman et al., 2014).

252  
253 The two key sectors that propelled the neoliberal growth under the AKP were  
254 construction and energy (Paker 2017; Özkaynak et al. 2020; Erensü 2018).  
255 Construction is of particular relevance for İstanbul since urban development  
256 undertaken through public and private investment in housing and infrastructural  
257 projects of vast proportions were realised most intensively and visibly in İstanbul. The  
258 most extravagant megaprojects, which were paraded by the government as the epitome  
259 of growth and grandeur despite considerable environmental costs and vigorous  
260 protests, were constructed in İstanbul, including the Third Bridge, the Third Airport

261 and highly contested and ecologically destructive Canal İstanbul project, for which  
262 construction is yet to begin (Erensü and Karaman, 2017; Paker, 2017; WWF, 2019).

263  
264 This city, as is the case in many other emerging economies, has followed a dynamic of  
265 government-led rapid urbanisation, in combination with shortage of land and  
266 stringent eviction policies, leading to the establishment of communities in  
267 environmentally hazardous areas particularly vulnerable to climate change impacts  
268 (Cabannes and Göral, 2020a; Satterthwaite et al., 2020). Moreover, the AKP has  
269 instrumentalised political support within a discourse of ‘*politics of serving*’, packaging  
270 the mega projects as services to ‘*the people*’, which promise to bring economic growth  
271 and grandeur to everyone (Paker, 2017).

272  
273 As a city of migration, Istanbul received significant migration from both within Turkey  
274 and abroad. Particularly with the rise of domestic migration from the Anatolian  
275 periphery from 1960s onwards, informal settlements (*gecekondu*) became modus  
276 operandi of housing, often posing significant risks. These informal and later-  
277 formalized settlements expanded significantly with the arrival of Kurdish  
278 communities, displacement of Romani people, and most recently the arrival of Syrian  
279 and Afghan refugees, amongst others. This is in addition to those economically  
280 marginalized residents who voluntarily and involuntarily moved to these areas for  
281 reasons of affordability. Today, some of the neighbourhoods in which marginalized  
282 urban populations reside, and which have been the focus of studies researching urban  
283 inequalities, environmental injustice and structural discrimination, include Sulukule  
284 (Uysal, 2012) and Tarlabası (Arıcan, 2020), as well as Yakacık, Hürriyet and Ayazma  
285 (Cabannes and Göral, 2020b).

286  
287 The neoliberal developmentalism of the AKP strengthens its hegemonic power,  
288 worsening these localized political inequalities. The growing emphasis of spatial  
289 segregation and inequality in İstanbul is representative of many global coastal  
290 megacities where rapid urbanisation has led to an increased risk for vulnerable  
291 communities to climate change impacts (Cabannes & Göral, 2020; Chu et al., 2017).

292  
293 The closing down of civic and political space for civil society in the past few years makes  
294 participation of marginalized groups extremely challenging. State-civil society  
295 relations in Turkey have always been strained due to an overbearing government that  
296 often uses exclusionary and co-optation based strategies aiming at control of civil  
297 society (Center for American Progress, 2017; Doyle, 2017; Keyman and İçduygu, 2003;  
298 Paker et al., 2013). Despite a political context defined by a historically centralist state  
299 deeply suspicious of local autonomy, there has been an extended period of growth in  
300 the numbers, influence, issue areas and rights-based activism in civil society roughly  
301 through 1990-2010. Civil society actors were able to navigate the contextual  
302 constraints and increase empowerment. However, spiralling de-democratization that  
303 has marked at least the past five years of AKP rule has not only made existing structural  
304 constraints ever more restrictive but has immobilised civil society and vulnerable  
305 groups.

306  
307 Although there has been a rise in the interest on adaptation planning and justice  
308 considerations, it can be argued that Istanbul is a laggard compared to other megacities  
309 in terms of scholarly attention on these topics (for some exceptions, see Aygün Oğur  
310 and Baycan, 2022; Connelly and Bal, 2016; Onur and Tezer, 2015; Yazar and York,

311 2021). Henceforth, this study responds to and justifies growing calls for exploring  
312 equity and justice criteria around climate change adaptation at the national and sub-  
313 national levels in Turkey (Turhan, 2017).

314

#### 315 **4 Methodological approach**

316

317 The methodological approach applied in this study was twofold. In the first instance, a  
318 policy content analysis was conducted to assess whether current policy documents  
319 were aligned with urban adaptation justice assessment criteria of (i) participation, (ii)  
320 capacity enhancement, (iii) governance, and (iv) justice integration into spatial  
321 planning. This would give an indication to the degree of inclusion of justice and equity  
322 concepts in current adaptation planning. In the second instance, the identified text  
323 passages were crosschecked and categorised according to (i) goals, (ii) targets, (iii)  
324 instruments, and (iv) agents, aim to determine the effectiveness of the adaptation  
325 policy in terms of urban justice. Expert consultations were then conducted with key  
326 stakeholders to supplement and substantiate the information derived from the policy  
327 content analysis.

328

##### 329 **a. Policy content analysis**

330

331 Climate change adaptation policies can be understood as strategic devices for adjusting  
332 to expected climate change impacts, as well as promoting equitable outcomes  
333 enhancing urban resilience (Dolšák and Prakash, 2018). Carrying out policy content  
334 analyses has shown to be effective in elucidating priorities with which strategic actions  
335 are aligned. Whilst there are several approaches to policy content analyses with a  
336 national focus available, the application of Vogel and Henstra (2015) was deemed  
337 highly appropriate in identifying four fundamental elements upon which effective local  
338 climate adaptation policy is conditional. The four fundamental elements include (i)  
339 goals, (ii) targets, (iii) instruments and (iv) agents (Vogel and Henstra, 2015).

340

341 In the context of policy, (i) goals are understood as the broad normative aim or desired  
342 outcome; (ii) targets are specific aims conducive to the achievement of policy goals,  
343 commonly assigned a tangible numerical value within a measuring system; (iii)  
344 instruments are understood as the tools and mechanisms with which the policy  
345 objectives will be reached, and (iv) agents are the actors involved in developing and  
346 employing the instruments for reaching these targets. If adaptation policies are to  
347 improve urban adaptation justice effectively, then these four fundamental elements  
348 need to be present.

349

350 Policy documents relevant to adaptation can be understood as collective missions,  
351 visions, or plans promoting specific courses of action for responding to climate change  
352 (Vogel and Henstra, 2015). They can take various forms, such as vision statements,  
353 strategic plans, development guidelines, sustainability strategies, or management  
354 plans (Vogel and Henstra, 2015). Policy documents relevant to climate change  
355 adaptation were selected from both national and municipal government authorities,  
356 and confirmed as the most relevant through expert consultations and available  
357 literature on the Turkish context (Balaban & Balaban, 2015; Savaşan, 2019).

358

359 As the national focal point under the UNFCCC, the Ministry for Environment and  
360 Urbanisation is the main institutional authority in Turkey for drafting and enacting



361 climate change policies (Balaban and Balaban, 2015; Yildirim and Onder, 2019). With  
 362 the aim of enhancing Turkey’s climate change adaptation capacity, the Ministry of  
 363 Environment and Urbanisation collaborated with several UN Agencies (including  
 364 UNEP, UNDP, FAO, and UNIDO) for drafting key policy documents (Turkish Ministry  
 365 of Environment and Urbanisation, 2010). Central is the Climate Change Strategy  
 366 (2010-2020) (Turkish Ministry of Environment and Urbanisation, 2011a), the  
 367 implementation of which is to be supported by the National Climate Change Action  
 368 Plan (2011-2023) (Turkish Ministry of Environment and Urbanisation, 2018), as well  
 369 as the National Climate Change Adaptation Strategy and Action Plan (Turkish Ministry  
 370 of Environment and Urbanisation, 2011b). In addition, a more recent policy document  
 371 was made available in the form of Turkey’s seventh communication under the UNFCCC  
 372 (İstanbul Metropolitan Municipality, 2018).

373  
 374 There is an absence of national adaptation regulations to streamline strategies in  
 375 municipalities at the sub-national level in Turkey. As of March 2021, only ten out of  
 376 thirty metropolitan municipalities in Turkey had climate action plans. Peker and Ataöv  
 377 (2021) identified five reasons as to why most local authorities in Turkey only focus on  
 378 energy-related topics in their climate planning. According to the authors, a possible  
 379 explanation may include “*the lack of actionable knowledge, legislative limitations,*  
 380 *staff-related and institutional hardship, financial burdens and lack of a collective*  
 381 *working mechanism*” (Peker and Ataöv, 2021). Responding to the 2015-2019 Strategic  
 382 Plan in which the aim was to mainstream adaptation activities and environmental  
 383 protection practices, İstanbul Metropolitan Municipality developed its own Climate  
 384 Change Adaptation Plan (ICCAP) (İstanbul Metropolitan Municipality 2018; Vizyon  
 385 2050 Office 2020). In part to support the implementation of the ICCAP, the İstanbul  
 386 Planning Agency (IPA) was created as a strategic planning unit, engaging in inclusive  
 387 planning efforts for achieving the strategies and vision of the city.  
 388

389 *Table 1 Policy documents relevant for climate change adaptation planning*

<b>Year</b>	<b>Title</b>	<b>Agency / Organization</b>	<b>Scale</b>	<b>Abbreviation</b>	<b>Pages total</b>
<b>2010</b>	Climate Change Strategy (2010-2020)	Ministry of Environment and Urbanisation	National	CCS	46
<b>2011</b>	National Climate Change Action Plan (2011-2023)	Ministry of Environment and Urbanisation	National	NCCAP	178
<b>2011</b>	National Climate Change Adaptation Strategy and Action Plan	Ministry of Environment and Urbanisation	National	NCCASAP	123
<b>2018</b>	Seventh National Communication of Turkey under the UNFCCC	Ministry of Environment and Urbanisation	National	SNCTU	265
<b>2018</b>	İstanbul Climate Change Adaptation Plan	İstanbul Metropolitan Municipality	Municipal / Local	ICCAP	41

390  
 391 The five policy documents selected for the policy content analysis have been listed in  
 392 Table 1. At time of carrying out this research and drafting the manuscript (September

393 2020 – August 2021), these constitute the most relevant policy documents and were  
394 hence included in the study. Official English versions of all policy documents were  
395 available. The aim was to determine whether priorities of strategic actions in terms of  
396 climate change adaptation were aligned with urban adaptation justice. This was carried  
397 out by closely reading the documents word for word in their entirety, interpreting and  
398 identifying relevant text passages related to one of either (i) participation, (ii) capacity  
399 enhancement, (iii) governance, or (iv) justice integration (Shi et al., 2016). In a second  
400 stage, to determine all relevant text passages had been identified, word searches were  
401 conducted (including adapt\*; communit\*; equa\*; equi\*; gender; informal; low-  
402 income; marginali\*; participa\*; poor; pov\*; vulnerab\*). Once the relevant text passages  
403 were identified, they were cross-checked and categorised under fundamental elements  
404 of effective adaptation policy either as (i) goals, (ii) targets, (iii) instruments, or (iv)  
405 agents (Vogel and Henstra, 2015).

406  
407 The following is an example that illustrates the methodological approach for this study.  
408 The text passage "*Publications and events which raise the awareness of stakeholders  
409 will improve overall support and willingness and mobilise local knowledge and  
410 resources*" (ICCAP, 2018: p.38) was identified as relevant due to it referring to the  
411 theme of "*participation*" in accordance with Shi et al. (2016), and subsequently was  
412 categorised as a "*policy instrument*" since it implies a tool or mechanism with which  
413 the policy objectives were to be reached in accordance with Vogel and Henstra (2015)  
414 (Appendix, Table 1). In another instance, the text passage "*to increase national  
415 preparedness and capacity in order to (...) adapt to impacts*" (CCS, 2010; p.9) was  
416 identified as relevant due to it referring to themes of "capacity enhancement" (Shi et  
417 al., 2016), and subsequently was categorised as a "policy goal" since it implies a broad  
418 normative aim or desired outcome (Vogel and Henstra, 2015) (Appendix, Table 2).

419  
420 Using this analytical approach, a matrix was compiled with the most relevant text  
421 passages (see Appendix 1). These were first translated into binary format and then  
422 aggregated to synthesised figures presented in the results section (for higher  
423 granularity, see Appendix 2). This allowed for displaying the presence of text passages  
424 referring to an adaptation justice criteria in the form of either a (i) goal, (ii) target, (iii)  
425 instrument, or (iv) agents, as well as for displaying the presence of fundamental  
426 elements for effective local adaptation policy for achieving (i) participation, (ii)  
427 capacity enhancement, (iii) governance, or (iv) equity in spatial planning in all five  
428 policy documents, which is how the data is presented in Section 5. This analytical  
429 approach further allows for assessing the operationalization of adaptation policy as a  
430 unit of analysis, facilitating finer-grained descriptions and examinations in scope,  
431 intent, and means of local adaptation policy (Vogel and Henstra, 2015).

## 432 433 **b. Expert consultations**

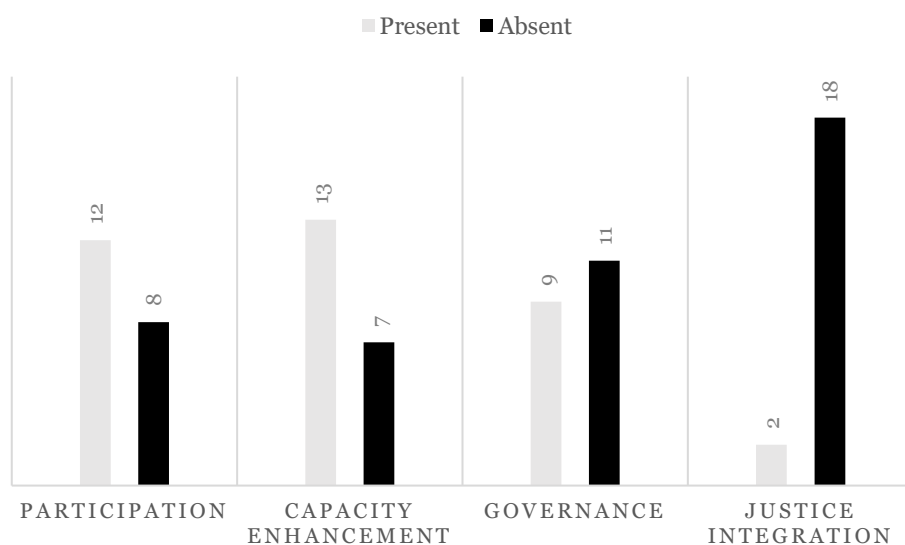
434  
435 In the second instance, key findings from the analysis were supplemented with data  
436 collected from semi-structured expert consultations. Integrating local expertise is key,  
437 as policy documents only to an extent reflect what is happening on the ground. Expert  
438 consultations are also useful in contextualising and nuancing data retrieved from  
439 desktop analyses.

440  
441 Semi-structured interviews were conducted as a form of qualitative data collection in  
442 late 2020 and early 2021 with experts from the İstanbul Metropolitan Municipality,

443 NGOs, and research institutions. All respondents have been in their position for 3+  
444 years and considered as having senior roles within their respective organizations. An  
445 expert was defined as someone with privileged access to information regarding  
446 decision-making processes around issues on climate change adaptation, urban  
447 planning, or community participation (Otto-Banaszak et al., 2011) in İstanbul and the  
448 wider Turkish region, and identified through the thematic and contextual expertise of  
449 the authors. A total of 10 experts were consulted through individual online interviews  
450 during which the results of the policy content analysis were discussed. The duration of  
451 interviews was between 45-60 minutes on average. In pre-identifying the criteria of  
452 urban just adaptation which formed the central theme to the semi-structured  
453 interviews, the qualitative analysis was deductive. The data collected was mapped out  
454 and compared and contrasted with the data collected through policy content analysis.  
455 The identities of the experts have been kept anonymous.

## 457 458 **5 Results**

459  
460 Figure 2 presents the number of policy documents in which the respective criteria for  
461 urban adaptation justice were present (in grey) vs the number of those in which they  
462 were absent (in black). While several sections referring to both participation and  
463 capacity enhancement were present, this was less common for governance, while  
464 justice integration was referred to only twice in all five policy documents.  
465



466  
467 *Figure 2 Presence of text passages referring to adaptation justice criteria across all five*  
468 *policy documents*

### 469 470 **i. Participation**

471  
472 The need for participation is recognised in every policy document, both at the national  
473 and at the municipal level (Appendix 1, Table 1). The importance of participation is  
474 illustrated by several of the national policy documents and the ICCAP having been co-  
475 developed with municipality officials and various other stakeholders (Green European  
476 Foundation, 2020), though criticism was voiced for the selective implementation of  
477 the participatory process resulting in the exclusion of several social justice advocacy

478 groups and environmental NGOs (İstanbul Metropolitan Municipality 2019).  
479 Additionally, whilst offering several possible instruments for implementing this goal  
480 during the adaptation process, there are no specific targets to achieve the goals set out,  
481 such as number of participatory vulnerability assessments to be conducted, or number  
482 of individual stakeholders or communities to be included.

483  
484 The lack of measures for implementation is reflected in statements from expert  
485 consultations, highlighting the lack of participatory mechanisms in adaptation  
486 planning. According to NGO representatives and researchers, the adaptation planning  
487 process was neither open nor inclusionary.

## 488 **ii. Capacity enhancement**

489  
490 Similar to participation, the need for capacity enhancement for adapting to climate  
491 change is recognised in every policy document (Appendix 1, Table 2). Again, there are  
492 no targets listed for achieving the goals, but support packages for cities to enhance  
493 adaptation plan preparation, and trainings and outreach strategies are listed in the  
494 NCCASAP, SNCTU and ICCAP documents respectively as instruments for capacity  
495 enhancement. The policy documents further list numerous agents for implementing  
496 these strategies, primarily initiated through external organizations such as the FAO or  
497 UNEP, but also through the Ministry of Environment and Urbanisation as well as from  
498 İstanbul Metropolitan Municipality.

499  
500 Lack of capacity at the municipal level was highlighted in expert consultations as a  
501 primary bottleneck for implementing climate change actions in Turkey. This  
502 observation reflected the notion held at national level that municipalities only had a  
503 minor role to play in adaptation processes.

## 504 **iii. Governance**

505  
506 With exception of the SNCTU, every policy document recognises the importance of a  
507 coordinated multilevel and polycentric approach to climate change adaptation,  
508 including the prioritization of integrating climate change into municipal and national  
509 development plans (Appendix 1, Table 3). The ICCAP highlights the importance of  
510 climate-change oriented dialogue and long-term cooperation. It is noticeable that  
511 while the importance of mainstreaming local climate change adaptation needs into  
512 national policy documents, this is not reciprocated from the national to the municipal  
513 level. It is also predominantly agents from the national level listed for achieving the  
514 policy goals.

515  
516 Climate change adaptation is not treated as a cross-cutting issue requiring multi-sector  
517 and multi-stakeholder engagement with only a limited number of agencies and  
518 municipal departments involved in the decision-making and policy planning process.  
519 Efforts for effective multilevel and polycentric governance were further described in  
520 local expert consultations as insufficient. The few initiatives which were presented at  
521 national level were rarely being implemented at the municipal level. Those initiatives  
522 which were successful were commonly implemented by international agencies,  
523 increasing the dependency of adaptation on external funds.

524  
525  
526

527 The expert consultations also revealed the highly politicised and strained relationship  
528 between national and municipal government. The Turkish governmental system is  
529 highly centralised, preventing efficient multilevel governance. Legal and budgetary  
530 control remains centralised, significantly constraining municipal capacity to respond  
531 to climate change according to local requirements.

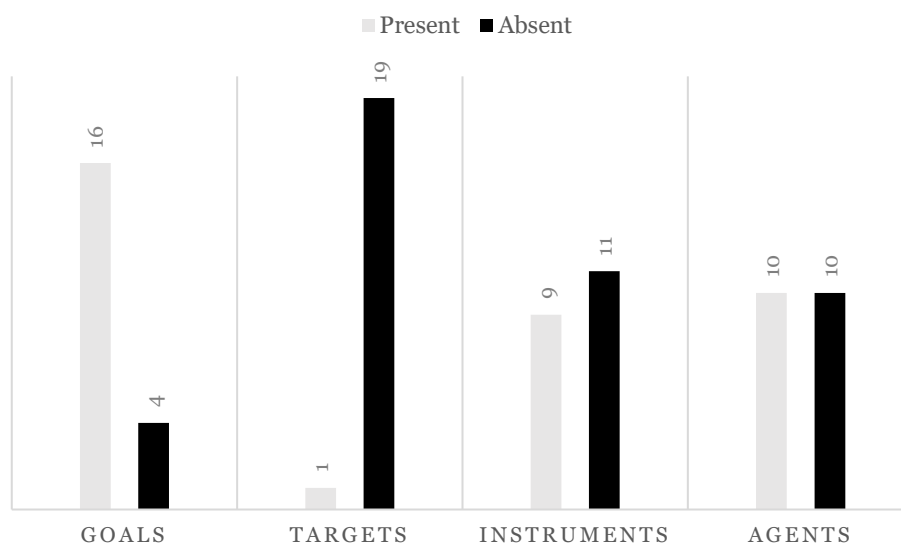
#### 532 **iv. Justice integration in spatial planning**

533 The SNCTU and NCCASAP are the only policy documents which acknowledge the  
534 importance of justice criteria in spatial planning by pointing out that “(...) *improvements to be maintained in the regions with low income will provide important contributions in terms of environmental sustainability*” (SNCTU, 2018; p.177), as well as listing “*Gender Mainstreaming*” as a cross-cutting issue for climate change adaptation (NCCASAP, 2011; p.94) (see Appendix 1, Table 4). Apart from these statements, no references for justice criteria were found, such as the specific consideration of vulnerable communities in spatial planning processes.

543 This finding was confirmed in expert consultations, in which the prevalent perception  
544 of adaptation being viewed solely as a technical issue was offered as an explanation.  
545 There were concerns voiced over considerations around new spatial planning projects  
546 being carried out by environmental engineers without sufficient expertise from social  
547 or political scientists or adequate community consultation.

#### 549 **b. Fundamental elements of effective adaptation policies**

550 Figure 3 depicts the number of policy documents in which the respective fundamental  
551 elements for effective adaptation policy were present (in grey) vs the number of those  
552 in which they were absent (in black). Out of the four fundamental elements, the  
553 majority of references in the policy documents respond to goals. There were several  
554 normative statements, from acknowledging the importance of stakeholder  
555 participation in adaptation planning to supporting the enhancement of capacities at  
556 the municipal level.



560 *Figure 3 Presence of text passages referring to fundamental elements for effective local*  
561 *adaptation policy across all five policy documents*  
562

563  
564 Agents were also mentioned on several occasions, though it is noteworthy that these  
565 were predominantly either from the Ministry of Environment and Urbanisation or  
566 international organizations. Some instruments were also suggested for implementing  
567 the stated goals, mainly relating to awareness raising and training activities such as  
568 workshops, publications and public information events. The distinct absence of  
569 specific and tangible targets is conspicuous. The sole target which was identified  
570 included “*establishing climate change research centres in vulnerable regions*”  
571 (NCCAP, 2011; p.155), though it is unclear whether this refers to the city of İstanbul.

## 572 573 574 **6 State of urban adaptation justice in İstanbul**

575  
576 In İstanbul, the importance placed on community-led initiatives through public  
577 participation reflects a discursive shift from the previous municipal administration in  
578 recognizing the importance of a multi-stakeholder and multi-sector response to the  
579 cross-cutting challenge of climate change adaptation, as well as the need to engage  
580 community and social justice advocacy groups (İstanbul Metropolitan Municipality,  
581 2019). The study developed here has enabled the assessment of these renewed efforts  
582 toward transformational adaptation, and the degree to which the underlying causes of  
583 vulnerability and enhancing equity and justice in ongoing development struggles are  
584 acknowledged and addressed. In the following, we turn to Shi et al.’s (2016) four-fold  
585 criteria to examine their reflection in the city’s adaptation planning.

### 586 587 **a. Participation**

588  
589 The participation of local communities in adaptation planning is recognised as a goal  
590 in all relevant policy documents. Setting ambitious goals is crucial, as this influences  
591 the content of other fundamental elements of climate change adaptation policy (Vogel  
592 and Henstra, 2015). However, there appears to be a significant gap between the legal  
593 provisions and reality on the ground, explained through the vagueness and  
594 implicitness of the implementation, lacking any notable targets. The proposed agents  
595 are predominantly from the Ministry of Environment and Urbanisation or external  
596 organizations, and not from the municipality. Instruments focus mainly on awareness-  
597 raising and enhancing public understanding to improve support and mobilise  
598 resources, as opposed to engaging the public in decision-making and policy planning  
599 processes. The absence of references specifically including vulnerable communities is  
600 particularly concerning, as uneven power relations risk to be reinforced through poorly  
601 designed participatory processes, increasing the likelihood of failing their stated  
602 objectives (Turnhout et al., 2020).

603  
604 Furthermore, the policy documents reveal little in terms of differentiation between  
605 vulnerable and non-vulnerable groups. This is a point of concern, as participation per  
606 se without the consideration of who is vulnerable and who is not, risks leading to  
607 further marginalization of those without power and influence (Schlosberg et al 2017).  
608 Vulnerable communities require specific forms of additional support, such as  
609 livelihood protection, disaster relief efforts and evacuation assistance, or access to  
610 healthcare services (Shi et al., 2016), which remains outside the scope of policy  
611 documents assessed.

612

## 613 **b. Capacity enhancement**

614  
615 For adaptation to respond to local needs, municipal governments require the necessary  
616 capacity to address the complexity of risk and vulnerability in implementing climate  
617 change adaptation. While the importance of capacity enhancement is acknowledged,  
618 the policy documents analysed remain vague in terms of implementation. The results  
619 of this study are indicative of a wider trend both internationally (Ziervogel et al. 2021)  
620 and in Turkey (Balaban, 2017; Yıldırım and Onder, 2019), in which the lack of  
621 recognition around the importance of capacity to adapt at the municipal level,  
622 particularly that of vulnerable communities, is commonplace.

623  
624 The lack of capacity is determined in part by a lack of external funding and budget  
625 availability for adaptation. From the expert consultations it became clear that socio-  
626 economic factors such as the lack of funds have a key role on municipal adaptation  
627 initiatives in Turkey, severely limiting the local response (ActAllianceEU, 2018; Tanik  
628 and Tekten, 2018; Yıldırım and Onder, 2019). In recent years, municipalities have  
629 benefitted from external resource funds to finance their climate change adaptation  
630 activities. Turkey is the single largest recipient of EU climate finance, on average  
631 receiving 667 million Euro per year between 2013 and 2016 (ClimateBrief, 2017). In  
632 the same period, Turkey was also the fifth largest recipient of multilateral climate  
633 funds, and hence most of the current climate change action plans have been funded by  
634 external actors. Likewise, to support funding of climate change adaptation at the  
635 municipal level, the national government appears to be pinning its hopes on being  
636 listed as a non-Annex country (hence leaving Annex-I of UNFCCC) through which it  
637 would gain access to financial mechanisms such as the Green Climate Fund  
638 (CarbonBrief, 2018).

639  
640 Further influences on municipal capacity include access of local planners and  
641 architects to trainings and workshops for enhancing knowledge and skill around the  
642 integration of climate change into everyday operations. Exchange and deliberation  
643 with local experts, as well as scenario development for building credibility and  
644 ownership has also shown to enhance municipal capacity (Shi et al., 2016). Unequal  
645 development resulting in pockets of low adaptive capacity is of particular concern in  
646 cities which have undergone rapid urbanisation processes, or are still growing in terms  
647 of population size (Shi et al., 2016).

## 648 **c. Governance**

649  
650  
651 Multilevel governance is embedded within a complex set of tensions between  
652 municipal and national government in terms of regulatory authority, revenue  
653 assignment and budget allocation (Shi et al., 2016). These tensions are particularly  
654 pronounced and fractious in the Turkish context (Kuyucu, 2018; Yılmaz and Turner,  
655 2019), and it is not uncommon for municipalities to lack the mandate over central areas  
656 of urban adaptation, including energy provision, transport networks, water supply  
657 systems, and risk infrastructure (Shi et al., 2016). Municipal adaptation in Turkey is  
658 therefore highly dependent on national government, whose approach appears to be  
659 hampered by an incoherent and lethargic national prioritization of climate change  
660 adaptation (Uzelgun and Şahin, 2016). Combined with the uneven engagement of  
661 municipal departments this may further limit the potential for mainstreaming climate

662 change adaptation into sub-national and municipal development and management  
663 policies (Shi et al., 2016).

664  
665 In addition, political instrumentalization has shown to play a key role in urban  
666 contexts. Multilevel decision-making and policy planning at provincial and municipal  
667 level has not been carried out in a coherent and concerted manner resulting in  
668 fragmented and bureaucratic administrative systems. This has precipitated the  
669 creation of disjointed departments, reminiscent of the notion of fragmented  
670 governance arenas in areas particularly vulnerable to climate change (Canitez et al.  
671 2020). While there is no clear strategy for climate change adaptation at the sub-  
672 national level, it is foreseen that municipal climate change action plans will be  
673 prepared for all metropolitan regions across Turkey by 2023 (Turkish Ministry of  
674 Environment and Urbanisation, 2018). In terms of polycentric governance, İstanbul  
675 has recently become well-connected to transnational networks and cities outside of  
676 Turkey. Illustrative of this is their participation in the C40 network, Resilient Cities,  
677 and various other climate change forums (Istanbul Metropolitan Municipality, 2019).  
678 Sub-national connectivity within Turkey is weak however, illustrated by a lack of  
679 municipality networks and exchange. Without support from national government, this  
680 priority may remain elusive.

681  
682 The main responsibility in terms of preparing and implementing sub-national climate  
683 actions and strategies is under the jurisdiction of the environmental departments of  
684 the municipalities. However, this constitutes an organizational obstacle in terms of  
685 producing sound climate adaptation policies since climate change has been treated as  
686 yet another environmental issue without addressing its crosscutting impacts which  
687 bear heavily on other social and economic problems. Accordingly, mitigation and  
688 adaptation actions that require a multi-sectoral approach have not been put into effect  
689 since many municipality departments overlook climate change. In terms of variety of  
690 actors implementing measures for urban adaptation justice, it is observable that the  
691 listed organizations are either international organizations, or from the environmental  
692 wing of government. Not only does this signify an over-reliance on external funds and  
693 an avoidance of responsibility, but it also indicates a narrow focus on departments of  
694 environmental and land-use planning (Shi et al., 2016). Similarly, the lack of  
695 engagement around social justice advocacy groups points toward a lack of support for  
696 polycentric governance.

#### 697 698 **d. Justice integration in spatial planning**

699  
700 The prioritization of physical vs social adaptation in İstanbul is illustrated by the  
701 dominance of engineers in environmental and planning departments. This responds  
702 to research indicating that technocratic approaches to spatial planning and climate  
703 change adaptation have shown to disadvantage vulnerable communities (Nost, 2019).  
704 There is a technical orientation prevalent to climate change adaptation in  
705 municipalities hiding the inherent implications for equity and justice considerations  
706 (Eakin et al., 2021). This elite-led techno-managerial approach does not alter the  
707 capitalist urbanity as it fails to question underlying power relations which determine  
708 the response to climate change (Swyngedouw, 2015). Leading adaptation scholars and  
709 practitioners have recommended a shift from technocratic approaches to social and  
710 institutional change with direct input from disadvantaged communities to redress  
711 inherent social vulnerability (Goh, 2020; Shi et al., 2016).



712  
713 When new infrastructure is being designed, or the reinforcing or retrofitting of  
714 infrastructure undertaken, there is a danger of an overemphasis on physical solutions  
715 as opposed to social, economic, or political reform (Eriksen et al., 2020). İstanbul is  
716 still a rapidly urbanizing city, and new infrastructure is a key component of the spatial  
717 planning process. Indeed, İstanbul's urban landscape is characterised by a focus on  
718 economic-growth centric urban development. The megaprojects have a history of being  
719 problematic for impacting and limiting social and economic benefits for marginalised  
720 communities (Paker, 2017; Shi et al., 2016).

721  
722 A prime example of this Infrastructural developmentalist approach is the Canal  
723 İstanbul project (İstanbul Planning Agency 2020). The proposal of constructing a new  
724 artificial waterway in western İstanbul between the Marmara Sea and the Black Sea for  
725 maximising vessel capacity comes at the cost of the destruction of agricultural lands  
726 crucial to the ecological resilience of the area (Yeşil Gazete, 2020). While propagated  
727 at the national level as a project of high economic importance, it has been met with  
728 harsh criticism by the municipality, being described as yet another megaproject which  
729 will lead to enhanced vulnerability to climate-induced extreme events for local  
730 communities (İstanbul Planning Agency, 2020). Ignoring attempts by the municipality  
731 to enhance consideration of affected communities further reveals a national agenda  
732 driven by economic interest, clientelism, and partisan divide.

733  
734

## 735 **7 Emerging issues in national and international context and** 736 **concluding remarks**

737  
738 By conducting a policy content analysis of municipal and national policy documents  
739 relevant for climate change adaptation, and supplementing findings with data from  
740 expert consultations, we aimed to evaluate urban justice in adaptation planning in  
741 İstanbul. As stated by Shi et al. (2016), one of the key drivers behind the development  
742 of the urban adaptation justice concept was to allow researchers from diverse  
743 disciplines to examine how urban responses to climate change redress, create, or  
744 exacerbate socio-spatial inequality. The application of the concept illustrated in this  
745 paper allowed for a holistic and detailed assessment. However, as is the nature with  
746 real-world operationalization of conceptual frameworks, some of the criteria proposed  
747 in Shi et al. (2016) require further elaboration and contextualization. An element of  
748 bias cannot be excluded when judging whether specific policies could be categorized as  
749 e.g. capacity-enhancing measures or not. Nonetheless, we argue the methodological  
750 approach chosen for this research, in addition to the diverse backgrounds and local  
751 expertise of the researchers and participants involved, have resulted in outputs which  
752 are meaningful and highly relevant today.

753  
754 Our study concludes that the origins of urban marginalization and their role in the  
755 underlying structures of vulnerability to climate change impacts are not being  
756 addressed. In line with other recent studies, we also argue that injustices based on  
757 socio-economic and gender inequalities are not adequately linked to climate change in  
758 İstanbul's context (Sarikoç Yıldırım, 2020). These are linked to structural  
759 impediments such as decision-making processes, regulations, institutional setup and  
760 resource allocation (Peker and Ataöv, 2021). This observation echoes the distinct lack  
761 of tangible and measurable targets enhancing the impressions of vagueness around

762 climate change adaptation policy, confirming previous findings describing Turkey's  
763 adaptation efforts as indistinct and poorly enforced (Savaşan 2019; Balaban 2017;  
764 Turhan 2017).

765  
766 While some agents were mentioned for employing instruments to implement policy  
767 objectives, these were predominantly embedded within the Ministry of Environment  
768 and Urbanisation. The executive aggrandisement and authoritarian consolidation that  
769 Turkey has experienced, in particular since the coup attempt in 2016 (Savaşan, 2021;  
770 Tansel, 2019), and the heavy emphasis on one-man rule by side-lining parliament and  
771 other regulative and administrative bodies including local authorities, without  
772 involving any specific departments or offices, or encouraging collaboration between  
773 state departments, reinforces this centrality of power (Kuyucu, 2018). There is also no  
774 mention of regulatory agencies or partnerships with NGOs or the private sector with  
775 close ties to affected communities which could enhance the employment of  
776 instruments for achieving policy objectives.

777  
778 Pre-existing conditions in municipalities resulting from a combination of neoliberal  
779 authoritarianism interacting with urban marginalization give rise to vulnerabilities  
780 which remain unconsidered in current adaptation policies. Indicative of this is the lack  
781 of consideration around vulnerable communities and participation of civil society in  
782 decision-making and policy planning processes, as well as the centralization of power.  
783 This is compounded by high levels of polarization and politicization. Particularly at the  
784 municipal level, neoliberal and developmentalist agendas have resulted in a reluctance  
785 of imposing progressive policies on urban adaptation.

786  
787 The question which invariably arises is whether authoritarian governments are  
788 generally poorly equipped to reflect context-sensitivity of climate change adaptation.  
789 Illustrative of this question is the distinct lack of strategies for municipalities in highly  
790 centralised states to overcome national inertia, ideological resistance and political  
791 instrumentalization for implementing climate change adaptation actions at the  
792 municipal level. There is a certain naivety and ambiguity in calling for enhanced urban  
793 adaptation justice through participation of vulnerable communities in authoritarian  
794 governance contexts. The call for increased inclusion of civil society in climate politics  
795 through the Paris Agreement is most often met with a refusal to recognise civil society  
796 as a legitimate actor (Dolšak and Prakash, 2018). In light of climate change projections  
797 it is also clear however that İstanbul will be severely impacted (Abadie et al. 2016), and  
798 the risk for local communities can only be minimised if participatory and inclusive  
799 approaches are adopted (Shi et al., 2016).

800  
801 In sum, we identify urban adaptation justice in authoritarian governance contexts as a  
802 critical research gap from this case study of İstanbul, a megacity depicting some of the  
803 key contradictions experienced across the Global South. Approaches need to be  
804 identified for redressing structural risks and vulnerabilities experienced by  
805 marginalised communities which reflect the highly political nature of adaptation  
806 (Eriksen et al. 2015). Whether this could include the support of social movements and  
807 activist initiatives through enabling international climate finance for adaptation  
808 remains an open question. However, addressing this research gap is particularly  
809 pressing as early evidence shows how climate change impacts are being manipulated  
810 by authoritarian leaders to seize power and solidify their stronghold over society and  
811 nature alike (The New Republic, 2018).

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## 8 References

- Abadie, Luis M., Elisa Sainz de Murieta, and Ibon Galarraga. 2016. “Climate Risk Assessment under Uncertainty: An Application to Main European Coastal Cities.” *Frontiers in Marine Science* 3 (DEC): 1–13. <https://doi.org/10.3389/fmars.2016.00265>.
- ActAllianceEU. 2018. “An Analysis of the Climate Finance Reporting of the European Union.” <https://actalliance.eu/wp-content/uploads/2018/04/Analysis-of-the-climate-finance-reporting-of-the-EU.pdf>.
- Adaman, Fikret, Bengi Akbulut, Yahya Madra, and Şevket Pamuk. 2014. “Hitting the Wall: Erdoğan’s Construction-Based, Finance-Led Growth Regime.” *The Middle East in London* 10 (3): 7–8.
- Adaman, Fikret, Murat Arsel, and Bengi Akbulut. 2017. “Introduction: Neoliberal Developmentalism in Turkey: Continuity, Rapture, Consolidation.” *Neoliberal Turkey and Its Discontents: Economic Policy and the Environment under Erdoğan*. London: IB Tauris, 1–17.
- Adger, W. Neil, Nigel W. Arnell, and Emma L. Tompkins. 2005. “Successful Adaptation to Climate Change across Scales.” *Global Environmental Change* 15 (2): 77–86. <https://doi.org/10.1016/j.gloenvcha.2004.12.005>.
- Anguelovski, Isabelle, Linda Shi, Eric Chu, Daniel Gallagher, Kian Goh, Zachary Lamb, Kara Reeve, and Hannah Teicher. 2016. “Equity Impacts of Urban Land Use Planning for Climate Adaptation: Critical Perspectives from the Global North and South.” *Journal of Planning Education and Research* 36 (3): 333–48. <https://doi.org/10.1177/0739456X16645166>.
- Aygün Oğur, A., Baycan, T., 2022. Identifying priority planning areas of Istanbul for climate change preparedness. *Asia-Pacific J. Reg. Sci.* 1–24.
- Bai, Xuemei, R.J. Dawson, D. Üрге-Vorsatz, G.C. Delgado, A.S. Barau, S. Dhakal, D. Dodman, et al. 2018. “Six Research Priorities for Cities and Climate Change.” *Nature* 555: 23–25.
- Balaban, O, and M Senol Balaban. 2015. “Adaptation To Climate Change: Barriers in the Turkish Local Context.” *Tema-Journal of Land Use Mobility and Environment*, no. SI: 7–22. <https://doi.org/10.6092/1970-9870/3650>.
- Balaban, Osman. 2017. “A Matter of Capacity: Climate Change and the Urban Challenges for Turkey.” *New Perspectives on Turkey* 56: 159–62. <https://doi.org/DOI:10.1017/npt.2017.22>.
- Brasseur, Guy P., and Laura Gallardo. 2016. “Climate Services: Lessons Learned and Future Prospects.” *Earth’s Future* 4 (3): 79–89. <https://doi.org/10.1002/2015EF000338>.
- Bulkeley, Harriet, and Vanesa Castán Broto. 2013. “Government by Experiment? Global Cities and the Governing of Climate Change.” *Transactions of the Institute of British Geographers* 38 (3): 361–75. <https://doi.org/10.1111/j.1475-5661.2012.00535.x>.
- Bulkeley, Harriet, Gareth A.S. Edwards, and Sara Fuller. 2014. “Contesting Climate Justice in the City: Examining Politics and Practice in Urban Climate Change Experiments.” *Global Environmental Change* 25 (1): 31–40. <https://doi.org/10.1016/j.gloenvcha.2014.01.009>.
- Cabannes, Yves, and Özgür Sevgi Göral. 2020. “Land Disputes on the Outskirts of Istanbul: A Unique Case of Legalization amidst Demolitions and Forced

- 862 Evictions.” *Environment and Urbanization* 32 (1): 69–88.  
863 <https://doi.org/10.1177/0956247819893187>.
- 864 Cahyani, D., Widaningsih, L., 2019. Identification of the Marginalized Urban  
865 Communities Characteristics and Preferences. *KnE Soc. Sci.* 2019, 178–192.  
866 <https://doi.org/10.18502/kss.v3i21.4967>
- 867 Canitez, Fatih, Pelin Alpkokin, and Sabahat Topuz Kiremitci. 2020. “Sustainable  
868 Urban Mobility in Istanbul: Challenges and Prospects.” *Case Studies on*  
869 *Transport Policy*, 8 (4): 1148-1157.  
870 <https://doi.org/https://doi.org/10.1016/j.cstp.2020.07.005>.
- 871 CarbonBrief. 2018. “The Carbon Brief Profile: Turkey.”  
872 <https://www.carbonbrief.org/carbon-brief-profile-turkey>.
- 873 Center for American Progress. 2017. “Trends in Turkish Civil Society.”  
874 [https://www.americanprogress.org/issues/security/reports/2017/07/10/435475](https://www.americanprogress.org/issues/security/reports/2017/07/10/435475/trends-turkish-civil-society/)  
875 [/trends-turkish-civil-society/](https://www.americanprogress.org/issues/security/reports/2017/07/10/435475/trends-turkish-civil-society/)
- 876 Chu, Eric, Isabelle Anguelovski, and Debra Roberts. 2017. “Climate Adaptation as  
877 Strategic Urbanism: Assessing Opportunities and Uncertainties for Equity and  
878 Inclusive Development in Cities.” *Cities* 60: 378–87.  
879 <https://doi.org/10.1016/j.cities.2016.10.016>.
- 880 Chu, Eric K, and Clare E B Cannon. 2021. “Equity, Inclusion, and Justice as Criteria  
881 for Decision-Making on Climate Adaptation in Cities.” *Current Opinion in*  
882 *Environmental Sustainability* 51: 85–94.  
883 <https://doi.org/https://doi.org/10.1016/j.cosust.2021.02.009>.
- 884 Chu, Eric, and Kavya Michael. 2018. “Recognition in Urban Climate Justice:  
885 Marginality and Exclusion of Migrants in Indian Cities.” *Environment and*  
886 *Urbanization* 31 (5): 139–56. <https://doi.org/10.1177/0956247818814449>.
- 887 Climate Brief. 2017. “Mapped: Where Multilateral Climate Funds Spend Their  
888 Money.” [https://www.carbonbrief.org/mapped-where-multilateral-climate-](https://www.carbonbrief.org/mapped-where-multilateral-climate-funds-spend-their-money)  
889 [funds-spend-their-money](https://www.carbonbrief.org/mapped-where-multilateral-climate-funds-spend-their-money)
- 890 Daloğlu Çetinkaya, I., Yazar, M., Kılınç, S., Güven, B., 2022. Urban climate resilience  
891 and water insecurity: future scenarios of water supply and demand in Istanbul.  
892 *Urban Water Journal*, 1–12.
- 893 Demircan, Mesut, Hüdaverdi Gürkan, Osman Eskiöglü, Hüseyin Arabacı, and  
894 Mustafa Coşkun. 2017. “Climate Change Projections for Turkey: Three Models  
895 and Two Scenarios.” *Turkish Journal of Water Science and Management* 1 (1):  
896 22–43. <https://doi.org/10.31807/tjwsm.297183>.
- 897 Demirkesen, A. C., F. Evrendilek, S. Berberoglu, and S. Kilic. 2007. “Coastal Flood  
898 Risk Analysis Using Landsat-7 ETM+ Imagery and SRTM DEM: A Case Study of  
899 Izmir, Turkey.” *Environmental Monitoring and Assessment* 131 (1–3): 293–300.  
900 <https://doi.org/10.1007/s10661-006-9476-2>.
- 901 Dilling, Lisa, Anjal Prakash, Zinta Zommers, Farid Ahmad, Nuvodita Singh, Sara de  
902 Wit, Johanna Nalau, Meaghan Daly, and Kerry Bowman. 2019. “Is Adaptation  
903 Success a Flawed Concept?” *Nature Climate Change* 9: 572-574.  
904 <https://doi.org/10.1038/s41558-019-0539-0>.
- 905 Dodman, David, Diane Archer, and David Satterthwaite. 2019. “Editorial:  
906 Responding to Climate Change in Contexts of Urban Poverty and Informality.”  
907 *Environment and Urbanization* 31 (1): 3–12.  
908 <https://doi.org/10.1177/0956247819830004>.
- 909 Döll, Petra, and Patricia Romero-Lankao. 2017. “How to Embrace Uncertainty in  
910 Participatory Climate Change Risk Management—A Roadmap.” *Earth’s Future* 5  
911 (1): 18–36. <https://doi.org/10.1002/2016EF000411>.

- 912 Dolšák, Nives, and Aseem Prakash. 2018. “The Politics of Climate Change  
913 Adaptation.” *Annual Review of Environment and Resources* 43: 317–41.  
914 <https://doi.org/10.1146/annurev-environ-102017-025739>.
- 915 Doyle, Jessica Leigh. 2017. “State Control of Civil Society Organizations: The Case of  
916 Turkey.” *Democratization* 24 (2): 244–64.
- 917 Dupont, Veronique, David Jordhus-Lier, Catherine Sutherland, and Einar Braathen.  
918 2016. *The Politics of Slums in the Global South*. New York: Routledge.
- 919 Eakin, Hallie, Jagadish Parajuli, Yamini Yogya, Marisa Manheim, and Bertha Herna.  
920 2021. “Entry Points for Addressing Justice and Politics in Urban Flood  
921 Adaptation Decision Making,” *Current Opinion in Environmental Sustainability*  
922 51: 1–6. <https://doi.org/10.1016/j.cosust.2021.01.001>.
- 923 Erensü, Sinan. 2018. “Powering Neoliberalization: Energy and Politics in the Making  
924 of a New Turkey.” *Energy Research & Social Science* 41: 148–57.  
925 <https://doi.org/https://doi.org/10.1016/j.erss.2018.04.037>.
- 926 Erensü, Sinan, and Ozan Karaman. 2017. “The Work of a Few Trees: Gezi, Politics  
927 and Space.” *International Journal of Urban and Regional Research* 41 (1): 19–  
928 36. <https://doi.org/10.1111/1468-2427.12387>.
- 929 Eriksen, Siri, Paulina Aldunce, Chandra Sekhar Bahinipati, Rafael D.Almeida  
930 Martins, John Isaac Molefe, Charles Nhemachena, Karen O’Brien, et al. 2011.  
931 “When Not Every Response to Climate Change Is a Good One: Identifying  
932 Principles for Sustainable Adaptation.” *Climate and Development* 3 (1): 7–20.  
933 <https://doi.org/10.3763/cdev.2010.0060>.
- 934 Eriksen, Siri H., Andrea J. Nightingale, and Hallie Eakin. 2015. “Reframing  
935 Adaptation: The Political Nature of Climate Change Adaptation.” *Global  
936 Environmental Change* 35: 523–33.  
937 <https://doi.org/10.1016/j.gloenvcha.2015.09.014>.
- 938 Eriksen, Siri, E. Lisa F. Schipper, Morgan Scoville-Simonds, Katharine Vincent, Hans  
939 Nicolai Adam, Nick Brooks, and Brian Harding. 2020. “Adaptation Interventions  
940 and Their Effect on Vulnerability in Developing Countries: Help, Hindrance or  
941 Irrelevance?” *World Development Review* 141: 105383.  
942 <https://doi.org/10.1016/j.worlddev.2020.105383>.
- 943 Fiack, Duran, Jeremy Cumberbatch, Michael Sutherland, and Nadine Zerphey. 2021.  
944 “Sustainable Adaptation: Social Equity and Local Climate Adaptation Planning  
945 in U.S. Cities.” *Cities* 115: 103235.  
946 <https://doi.org/https://doi.org/10.1016/j.cities.2021.103235>.
- 947 Financial Times. 2020. “Turkey Tightens Government Control over Civil Society  
948 Groups.” [www.ft.com/content/0c097861-7c02-45c4-88b5-5d0d6af32fb8](http://www.ft.com/content/0c097861-7c02-45c4-88b5-5d0d6af32fb8)
- 949 Fitzgibbons, Joanne, and Carrie L Mitchell. 2019. “Just Urban Futures? Exploring  
950 Equity in ‘100 Resilient Cities.’” *World Development* 122: 648–59.  
951 <https://doi.org/https://doi.org/10.1016/j.worlddev.2019.06.021>.
- 952 Goh, Kian. 2020. “Urbanising Climate Justice: Constructing Scales and Politicising  
953 Difference.” *Cambridge Journal of Regions, Economy and Society* 13 (3): 559–  
954 74. <https://doi.org/10.1093/cjres/rsaa010>.
- 955 Green European Foundation. 2020. “Making the City Green with Civil Society:  
956 Roundtable Meeting Report of IMM-Civil Society Relations within the  
957 Framework of Green City.” [https://gef.eu/wp-  
958 content/uploads/2021/02/Roundtable\\_Meeting\\_Report\\_of\\_IMM.pdf](https://gef.eu/wp-content/uploads/2021/02/Roundtable_Meeting_Report_of_IMM.pdf).
- 959 Gregorio, Monica Di, Leandra Fatorelli, Jouni Paavola, Bruno Locatelli, Emilia  
960 Pramova, Dodik Ridho Nurrochmat, Peter H. May, Maria Brockhaus, Intan  
961 Maya Sari, and Sonya Dyah Kusumadewi. 2019. “Multi-Level Governance and

- 962 Power in Climate Change Policy Networks.” *Global Environmental Change* 54:  
963 64–77. <https://doi.org/10.1016/j.gloenvcha.2018.10.003>.
- 964 Güçlü, Y. S., E. Şişman, and M. Yeleşen. 2018. “Climate Change and Frequency–  
965 Intensity–Duration (FID) Curves for Florya Station, Istanbul.” *Journal of Flood*  
966 *Risk Management* 11: S403–18. <https://doi.org/10.1111/jfr3.12229>.
- 967 Hallegatte, Stephane, and Julie Rozenberg. 2017. “Climate Change through a Poverty  
968 Lens.” *Nature Climate Change* 7 (4): 250–56.  
969 <https://doi.org/10.1038/nclimate3253>.
- 970 Hess, David J, and Rachel G McKane. 2021. “Making Sustainability Plans More  
971 Equitable: An Analysis of 50 U.S. Cities.” *Local Environment*, March, 1–16.  
972 <https://doi.org/10.1080/13549839.2021.1892047>.
- 973 IPCC. 2018. “Strengthening and Implementing the Global Response.”  
974 [https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15\\_Chapter4\\_Lo](https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15_Chapter4_Low_Res.pdf)  
975 [w\\_Res.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15_Chapter4_Low_Res.pdf).
- 976 IPCC. 2022. “Working Group II: Impacts, Adaptation and Vulnerability.”  
977 <https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/>
- 978 Istanbul Metropolitan Municipality. 2014. “Strategic Plan 2015-2019.”  
979 [http://www.ibb.gov.tr/en-](http://www.ibb.gov.tr/en-US/Organization/Birimler/StratejikPlanlamaMd/Documents/stratejik_plan_20)  
980 [US/Organization/Birimler/StratejikPlanlamaMd/Documents/stratejik\\_plan\\_20](http://www.ibb.gov.tr/en-US/Organization/Birimler/StratejikPlanlamaMd/Documents/stratejik_plan_20)  
981 [15-2019.pdf](http://www.ibb.gov.tr/en-US/Organization/Birimler/StratejikPlanlamaMd/Documents/stratejik_plan_20).
- 982 ———. 2019. “Mayor Imamoglu Speaks at C40 Summit.”  
983 <https://www.ibb.istanbul/en/News/Detail/1453>.
- 984 Istanbul Metropolitan Municipality. 2018. “Istanbul Climate Change Action Plan.”  
985 <https://www.iklim.istanbul/wp-content/uploads/ÖzetRaporİngilizce.pdf>.
- 986 Istanbul Planning Agency. 2020. *Canal Istanbul*.
- 987 Keyder, Çağlar. 2018. “Imperial, National, and Global Istanbul: Three Istanbul  
988 ‘Moments’ from the Nineteenth to Twenty-First Centuries.” In *Istanbul*, 25–37.  
989 Rutgers University Press.
- 990 Keyman, E Fuat, and Ahmet İçduygu. 2003. “Globalization, Civil Society and  
991 Citizenship in Turkey: Actors, Boundaries and Discourses.” *Citizenship Studies* 7  
992 (2): 219–34.
- 993 Kojola, Erik, and David N Pellow. 2020. “New Directions in Environmental Justice  
994 Studies : Examining the State and Violence.” *Environmental Politics* 1–19.  
995 <https://doi.org/10.1080/09644016.2020.1836898>.
- 996 Kuyucu, Tuna. 2018. “Politics of Urban Regeneration in Turkey: Possibilities and  
997 Limits of Municipal Regeneration Initiatives in a Highly Centralized Country.”  
998 *Urban Geography* 39 (8): 1152–76.  
999 <https://doi.org/10.1080/02723638.2018.1440125>.
- 1000 Lemos, Maria Carmen, CJ Kirchhoff, and V. Ramprasad. 2012. “Narrowing the  
1001 Climate Information Usability Gap.” *Nature Climate Change* 2: 789–94.
- 1002 Long, Joshua, and Jennifer L. Rice. 2019. “From Sustainable Urbanism to Climate  
1003 Urbanism.” *Urban Studies* 56 (5): 992–1008.  
1004 <https://doi.org/10.1177/0042098018770846>.
- 1005 Morgan, Edward A., Johanna Nalau, and Brendan Mackey. 2019. “Assessing the  
1006 Alignment of National-Level Adaptation Plans to the Paris Agreement.”  
1007 *Environmental Science and Policy* 93 (November): 208–20.  
1008 <https://doi.org/10.1016/j.envsci.2018.10.012>.
- 1009 Moser, S.C., Ekstrom, J.A., 2010. A framework to diagnose barriers to climate change  
1010 adaptation. *Proc. Natl. Acad. Sci.* 107, 22026–31.  
1011 <https://doi.org/10.1073/pnas.1007887107>

- 1012 Nalau, Johanna, Benjamin L Preston, and Megan C Maloney. 2014. “Is Adaptation a  
1013 Local Responsibility?” *Environmental Science and Policy* 48: 89–98.  
1014 <https://doi.org/10.1016/j.envsci.2014.12.011>.
- 1015 Norström, Albert V, Christopher Cvitanovic, Marie F Löf, Simon West, Carina  
1016 Wyborn, Patricia Balvanera, Angela T Bednarek, et al. 2020. “Principles for  
1017 Knowledge Co-Production in Sustainability Research.” *Nature Sustainability*, 9.  
1018 <https://doi.org/10.1038/s41893-019-0448-2>.
- 1019 Nost, Eric. 2019. “Climate Services for Whom? The Political Economics of  
1020 Contextualizing Climate Data in Louisiana’s Coastal Master Plan.” *Climatic  
1021 Change* 157 (1): 27–42. <https://doi.org/10.1007/s10584-019-02383-z>.
- 1022 Olazabal, Marta, Eric Chu, Vanesa Castán Broto, and James J. Patterson. 2021.  
1023 “Subaltern Forms of Knowledge Are Required to Boost Local Adaptation.” *One  
1024 Earth*.
- 1025 Olazabal, Marta, Maria Ruiz de Gopegui, Emma L Tompkins, Kayin Venner, and  
1026 Rachel Smith. 2019. “A Cross-Scale Worldwide Analysis of Coastal Adaptation  
1027 Planning.” *Environmental Research Letters* 14 (12): 124056.  
1028 <https://doi.org/10.1088/1748-9326/ab5532>.
- 1029 Onur, A.C., Tezer, A., 2015. Ecosystem services based spatial planning decision  
1030 making for adaptation to climate changes. *Habitat Int.* 47, 267–278.  
1031 <https://doi.org/10.1016/j.habitatint.2015.01.008>
- 1032 Ostrom, Elinor. 2009. “A Polycentric Approach for Coping with Climate Change.”  
1033 *World Bank Policy Research Working Paper No. 5095*.  
1034 [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1494833](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1494833).
- 1035 ———. 2010. “Beyond Markets and States: Polycentric Governance of Complex  
1036 Economic Systems.” *American Economic Review* 100: 641–72.  
1037 <https://doi.org/10.1257/aer.100.3.641>.
- 1038 Otto-Banaszak, Iлона, Piotr Matczak, Justus Wesseler, and Frank Wechsung. 2011.  
1039 “Different Perceptions of Adaptation to Climate Change: A Mental Model  
1040 Approach Applied to the Evidence from Expert Interviews.” *Regional  
1041 Environmental Change* 11 (2): 217–28. <https://doi.org/10.1007/s10113-010-0144-2>.
- 1043 Özkaynak, Begüm, Ethemcan Turhan, and Cem İskender Aydın. 2020. “The Politics  
1044 of Energy in Turkey.” In *The Oxford Handbook of Turkish Politics*.
- 1045 Paker, Hande. 2017. “The ‘Politics of Serving’ and Neoliberal Developmentalism: The  
1046 Megaprojects of the AKP as Tools of Hegemony Building.” In *Neoliberal Turkey  
1047 and Its Discontents: Economic Policy and the Environment under Erdogan*,  
1048 edited by Adaman, Akbulut, and Arsel. Tauris.
- 1049 Paker, Hande, Fikret Adaman, Zeynep Kadirbeyoğlu, and Begüm Özkaynak. 2013.  
1050 “Environmental Organisations in Turkey: Engaging the State and Capital.”  
1051 *Environmental Politics* 22 (5): 760–78.
- 1052 Reckien, Diana, Felix Creutzig, Blanca Fernandez, Shuaib Lwasa, Marcela Tovar-  
1053 Restrepo, Darryn Mcevoy, and David Satterthwaite. 2017. “Climate Change,  
1054 Equity and the Sustainable Development Goals: An Urban Perspective.”  
1055 *Environment and Urbanization* 29 (1): 159–82.  
1056 <https://doi.org/10.1177/0956247816677778>.
- 1057 Roberts, Erin, and Mark Pelling. 2020. “Loss and Damage: An Opportunity for  
1058 Transformation?” *Climate Policy* 20 (6): 758–71.  
1059 <https://doi.org/10.1080/14693062.2019.1680336>.
- 1060 Robin, Enora, and Vanesa Castán Broto. 2020. “Towards a Postcolonial Perspective  
1061 on Climate Urbanism.” *International Journal of Urban and Regional Research*.

- 1062 <https://doi.org/10.1111/1468-2427.12981>.
- 1063 Rosendo, S., L. Celliers, and M. Mechisso. 2018. “Doing More with the Same: A
- 1064 Reality-Check on the Ability of Local Government to Implement Integrated
- 1065 Coastal Management for Climate Change Adaptation.” *Marine Policy* 87: 29–39.
- 1066 <https://doi.org/10.1016/j.marpol.2017.10.001>.
- 1067 Şahin, Ümit. 2016. “Warming a Frozen Policy: Challenges to Turkey’s Climate Politics
- 1068 after Paris.” *Turkish Policy Quarterly* 15 (2): 117–19.
- 1069 Sarıkoç Yıldırım, Beyza. 2020. “Climate Justice at the Local Level: The Case of
- 1070 Turkey.” *Politikon: The IAPSS Journal of Political Science* 45 (June): 7–30.
- 1071 <https://doi.org/10.22151/politikon.45.1>.
- 1072 Satterthwaite, David, Diane Archer, Sarah Colenbrander, David Dodman, Jorgelina
- 1073 Hardoy, and Diana Mitlin. 2020. “Building Resilience to Climate Change in
- 1074 Informal Settlements.” *One Earth* 2 (2): 143–56.
- 1075 <https://doi.org/10.1016/j.oneear.2020.02.002>.
- 1076 Savaşan, Zerrin. 2019. “Climate Governance in Turkey: A Forward-Looking
- 1077 Perspective.” *Turkish Studies* 20 (4): 541–71.
- 1078 <https://doi.org/10.1080/14683849.2019.1613895>.
- 1079 Savaşkan, Osman. 2021. “Political Dynamics of Local Government Reform in a
- 1080 Development Context: The Case of Turkey.” *Environment and Planning C:*
- 1081 *Politics and Space* 39 (1): 204–25. <https://doi.org/10.1177/2399654420943903>.
- 1082 Schell, Christopher J., Karen Dyson, Tracy L. Fuentes, Simone Des Roches, Nyeema
- 1083 C. Harris, Danica Sterud Miller, Cleo A. Woelfle-Erskine, and Max R. Lambert.
- 1084 2020. “The Ecological and Evolutionary Consequences of Systemic Racism in
- 1085 Urban Environments.” *Science* 369 (6510): 1–19.
- 1086 <https://doi.org/10.1126/science.aay4497>.
- 1087 Schlosberg, D., Collins, L.B., 2014. From environmental to climate justice: Climate
- 1088 change and the discourse of environmental justice. *Wiley Interdiscip. Rev. Clim.*
- 1089 *Chang.* 5, 359–374. <https://doi.org/10.1002/wcc.27>
- 1090 Schlosberg, David, Lisette B. Collins, and Simon Niemeyer. 2017. “Adaptation Policy
- 1091 and Community Discourse: Risk, Vulnerability, and Just Transformation.”
- 1092 *Environmental Politics* 26 (3): 413–37.
- 1093 <https://doi.org/10.1080/09644016.2017.1287628>.
- 1094 Sen, Amartya. 1997. “Editorial: Human Capital and Human Capability.” *World*
- 1095 *Development* 25 (12): 1959–61. [https://doi.org/10.1016/S0305-750X\(97\)10014-](https://doi.org/10.1016/S0305-750X(97)10014-6)
- 1096 [6](https://doi.org/10.1016/S0305-750X(97)10014-6).
- 1097 Shi, Linda, Eric Chu, Isabelle Anguelovski, Alexander Aylett, Jessica Debats, Kian
- 1098 Goh, Todd Schenk, et al. 2016. “Roadmap towards Justice in Urban Climate
- 1099 Adaptation Research.” *Nature Climate Change* 6 (2): 131–37.
- 1100 <https://doi.org/10.1038/nclimate2841>.
- 1101 Sovacool, Benjamin K. 2013. “Adaptation: The Complexity of Climate Justice.”
- 1102 *Nature Climate Change* 3 (11): 959–60. <https://doi.org/10.1038/nclimate2037>.
- 1103 Swyngedouw, Erik. 2015. “Politicizing Urban Political Ecologies.” *The Routledge*
- 1104 *Handbook of Political Ecology*, 609.
- 1105 Taconet, Nicolas, Aurélie Méjean, and Céline Guivarch. 2020. “Influence of Climate
- 1106 Change Impacts and Mitigation Costs on Inequality between Countries.”
- 1107 *Climatic Change.* <https://doi.org/10.1007/s10584-019-02637-w>.
- 1108 Tanik, Aysegul, and Deniz Tekten. 2018. “Planning Climate Change Adaptation
- 1109 Activities for Turkey.” *International Journal of Environmental Science and*
- 1110 *Development* 9 (9): 258–65. <https://doi.org/10.18178/ijesd.2018.9.9.1110>.
- 1111 Tansel, Cemal Burak. 2019. “Reproducing Authoritarian Neoliberalism in Turkey:



- 1112 Urban Governance and State Restructuring in the Shadow of Executive  
1113 Centralization.” *Globalizations* 16 (3): 320–35.  
1114 <https://doi.org/10.1080/14747731.2018.1502494>.
- 1115 The New Republic. 2018. “Climate Kings: How a New Generation of Authoritarian  
1116 Leaders Are Using Climate Change to Seize Power.”  
1117 <https://newrepublic.com/article/148861/climate-change-authoritarian-leaders>.
- 1118 Turhan, Ethemcan. 2017. “Right Here, Right Now: A Call for Engaged Scholarship on  
1119 Climate Justice in Turkey.” *New Perspectives on Turkey* 56 (May 2017): 152–58.  
1120 <https://doi.org/10.1017/npt.2017.21>.
- 1121 Turkish Ministry of Environment and Urbanisation. 2010. “Climate Change Strategy  
1122 2010- 2023.”  
1123 [https://www.csb.gov.tr/db/iklim/editor dosya/iklim\\_degisikligi\\_stratejisi\\_EN.p](https://www.csb.gov.tr/db/iklim/editor dosya/iklim_degisikligi_stratejisi_EN.pdf)  
1124 [df](https://www.csb.gov.tr/db/iklim/editor dosya/iklim_degisikligi_stratejisi_EN.pdf).
- 1125 ———. 2011a. “National Climate Change Action Plan 2011-2023.”  
1126 <http://www.dsi.gov.tr/docs/iklim-degisikligi/1depeng.pdf?sfvrsn=2>.
- 1127 ———. 2011b. “Turkey’s National Climate Change Adaptation Strategy and Action  
1128 Plan.” [http://www.csb.gov.tr/db/iklim/editor dosya/Adaptation\\_Strategy.pdf](http://www.csb.gov.tr/db/iklim/editor dosya/Adaptation_Strategy.pdf).
- 1129 ———. 2018. “Seventh National Communication of Turkey under the UNFCCC.”  
1130 [https://unfccc.int/sites/default/files/resource/496715\\_Turkey-NC7-1-7th](https://unfccc.int/sites/default/files/resource/496715_Turkey-NC7-1-7th)  
1131 [National Communication of Turkey.pdf](https://unfccc.int/sites/default/files/resource/496715_Turkey-NC7-1-7th).
- 1132 Turnhout, Esther, Tamara Metze, Carina Wyborn, Nicole Klenk, and Elena Louder.  
1133 2020. “The Politics of Co-Production: Participation, Power, and  
1134 Transformation.” *Current Opinion in Environmental Sustainability* 42 (2018):  
1135 15–21. <https://doi.org/10.1016/j.cosust.2019.11.009>.
- 1136 Uysal, Ü.E., 2012. An urban social movement challenging urban regeneration: The  
1137 case of Sulukule, Istanbul. *Cities* 29, 12–22.  
1138 <https://doi.org/10.1016/j.cities.2011.06.004>
- 1139 Uzelgun, Mehmet Ali, and Ümit Şahin. 2016. “Climate Change Communication in  
1140 Turkey.” *Oxford Research Encyclopedia of Climate Science*, no. June: 1–21.  
1141 <https://doi.org/10.1093/acrefore/9780190228620.013.466>.
- 1142 Vincent, Katharine, Suzanne Carter, Anna Steynor, Emma Visman, and Katinka Lund  
1143 Wågsæther. 2020. “Addressing Power Imbalances in Co-Production.” *Nature*  
1144 *Climate Change* 10 (10): 877–78. [https://doi.org/10.1038/s41558-020-00910-](https://doi.org/10.1038/s41558-020-00910-w)  
1145 [w](https://doi.org/10.1038/s41558-020-00910-w).
- 1146 Vizyon 2050 Office. 2020. “Istanbul Planning Agency Launch.”  
1147 [https://www.vizyon2050.istanbul/eventdetail-2-11-](https://www.vizyon2050.istanbul/eventdetail-2-11-istanbul_planning_agency_launch)  
1148 [istanbul\\_planning\\_agency\\_launch](https://www.vizyon2050.istanbul/eventdetail-2-11-istanbul_planning_agency_launch).
- 1149 Vogel, Brennan, and Daniel Henstra. 2015. “Studying Local Climate Adaptation: A  
1150 Heuristic Research Framework for Comparative Policy Analysis.” *Global*  
1151 *Environmental Change* 31: 110–20.  
1152 <https://doi.org/10.1016/j.gloenvcha.2015.01.001>.
- 1153 Westman, Linda, and Vanesa Castán Broto. 2021. “Transcending Existing Paradigms:  
1154 The Quest for Justice in Urban Climate Change Planning.” *Local Environment*  
1155 26 (5): 536–41. <https://doi.org/10.1080/13549839.2021.1916903>.
- 1156 Williams, David Samuel. 2020. “Enhancing Autonomy for Climate Change  
1157 Adaptation Using Participatory Modeling.” *Weather, Climate, and Society* 12  
1158 (4): 667–78. <https://doi.org/10.1175/WCAS-D-20-0024.1>.
- 1159 Wilson, Robyn S., Atar Herziger, Matthew Hamilton, and Jeremy S. Brooks. 2020.  
1160 “From Incremental to Transformative Adaptation in Individual Responses to  
1161 Climate-Exacerbated Hazards.” *Nature Climate Change* 10 (3): 200–208.

- 1162 <https://doi.org/10.1038/s41558-020-0691-6>.
- 1163 WWF, 2019. Ya Kanal Ya İstanbul: Kanal İstanbul Projesinin Ekolojik, Sosyal ve
- 1164 Ekonomik
- 1165 Değerlendirmesi. [https://wwftr.awsassets.panda.org/downloads/yakanalyaistan](https://wwftr.awsassets.panda.org/downloads/yakanalyaistanbulpdf_duzeltildi.pdf)
- 1166 [bulpdf\\_duzeltildi.pdf](https://wwftr.awsassets.panda.org/downloads/yakanalyaistanbulpdf_duzeltildi.pdf)
- 1167 Yazar, M., York, A., 2021. Urban climate governance under the national government
- 1168 shadow: Evidence from Istanbul. *Journal of Urban Affairs*, 1–17.
- 1169 <https://doi.org/10.1080/07352166.2021.1915151>
- 1170 Yeşil Gazete. 2020. “İklim Politikaları Açısından Kanal İstanbul: Yangına Körükle
- 1171 Gitmek.” [https://yesilgazete.org/iklim-politikalari-acisindan-kanal-istanbul-](https://yesilgazete.org/iklim-politikalari-acisindan-kanal-istanbul-yangina-korukle-gitmek/)
- 1172 [yangina-korukle-gitmek/](https://yesilgazete.org/iklim-politikalari-acisindan-kanal-istanbul-yangina-korukle-gitmek/).
- 1173 Yıldırım, Korkmaz, and Murat Onder. 2019. “Collaborative Role of Metropolitan
- 1174 Municipalities in Local Climate Protection Governance Strategies: The Case of
- 1175 Turkish Metropolitan Cities.” *Journal of Environmental Assessment Policy and*
- 1176 *Management* 21 (2): 1–23. <https://doi.org/10.1142/S1464333219500066>.
- 1177 Yılmaz, Zafer, and Bryan S Turner. 2019. “Turkey ’ s Deepening Authoritarianism and
- 1178 the Fall of Electoral Democracy.” *British Journal of Middle Eastern Studies* 46
- 1179 (5): 691–98. <https://doi.org/10.1080/13530194.2019.1642662>.
- 1180 Ziervogel, G, J Enqvist, L Metelerkamp, and J van Breda. 2021. “Supporting
- 1181 Transformative Climate Adaptation: Community-Level Capacity Building and
- 1182 Knowledge Co-Creation in South Africa.” *Climate Policy* 0 (0): 1–16.
- 1183 <https://doi.org/10.1080/14693062.2020.1863180>.
- 1184 Ziervogel, Gina, Mark Pelling, Anton Cartwright, Eric Chu, Tanvi Deshpande, Leila
- 1185 Harris, Keith Hyams, et al. 2017. “Inserting Rights and Justice into Urban
- 1186 Resilience: A Focus on Everyday Risk.” *Environment and Urbanization* 29 (1):
- 1187 123–38. <https://doi.org/10.1177/0956247816686905>
- 1188
- 1189
- 1190