

COTTON.O.POLIS  
Research

*Tracing Waters, Weaving Power, Sewing Doubt*

*Invisible Cities:*  
**A TALE OF  
TOMORROW'S  
ARCHITECTURE**



This project is looking for **invisible cities**, fuzzy networks of a metropolises hidden in the region of Xinjiang, China.

It will did so by **tracing water** through the landscape...

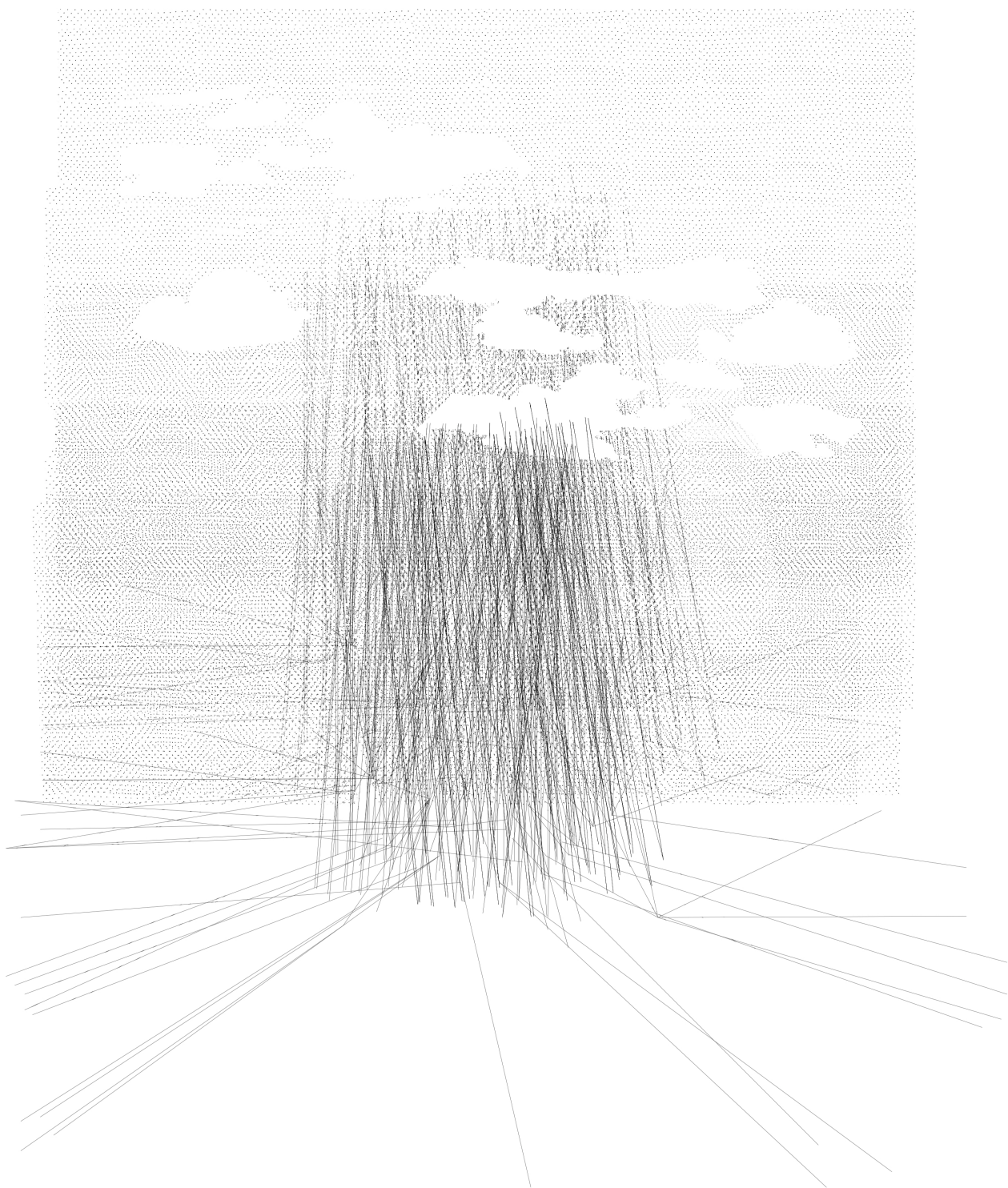
to reveal the **weaving powers** which constitute these invisible cities...

and **sew doubt** in the light of their obscurity.

The collection of this research, thus informed a proposal which sought to question why these cities should be visible and imagine a possible future in which architecture can provide this.

But to begin, let us ground you in some context...





Massing the network



invisible cities

tracing water

weaving powers

sew doubt



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## 1.0 Research:

*Tracing Water, Weaving Power, Sewing Doubt*

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4. Weaving Powers
  - What is grown
  - Who has a vested interest
5. Sewing Doubt
  - A Blind Eye: who labours

## 2.0 Manual:

*How to grow cotton in a desert*

1. Position



## 1.1 An introduction to Xinjiang

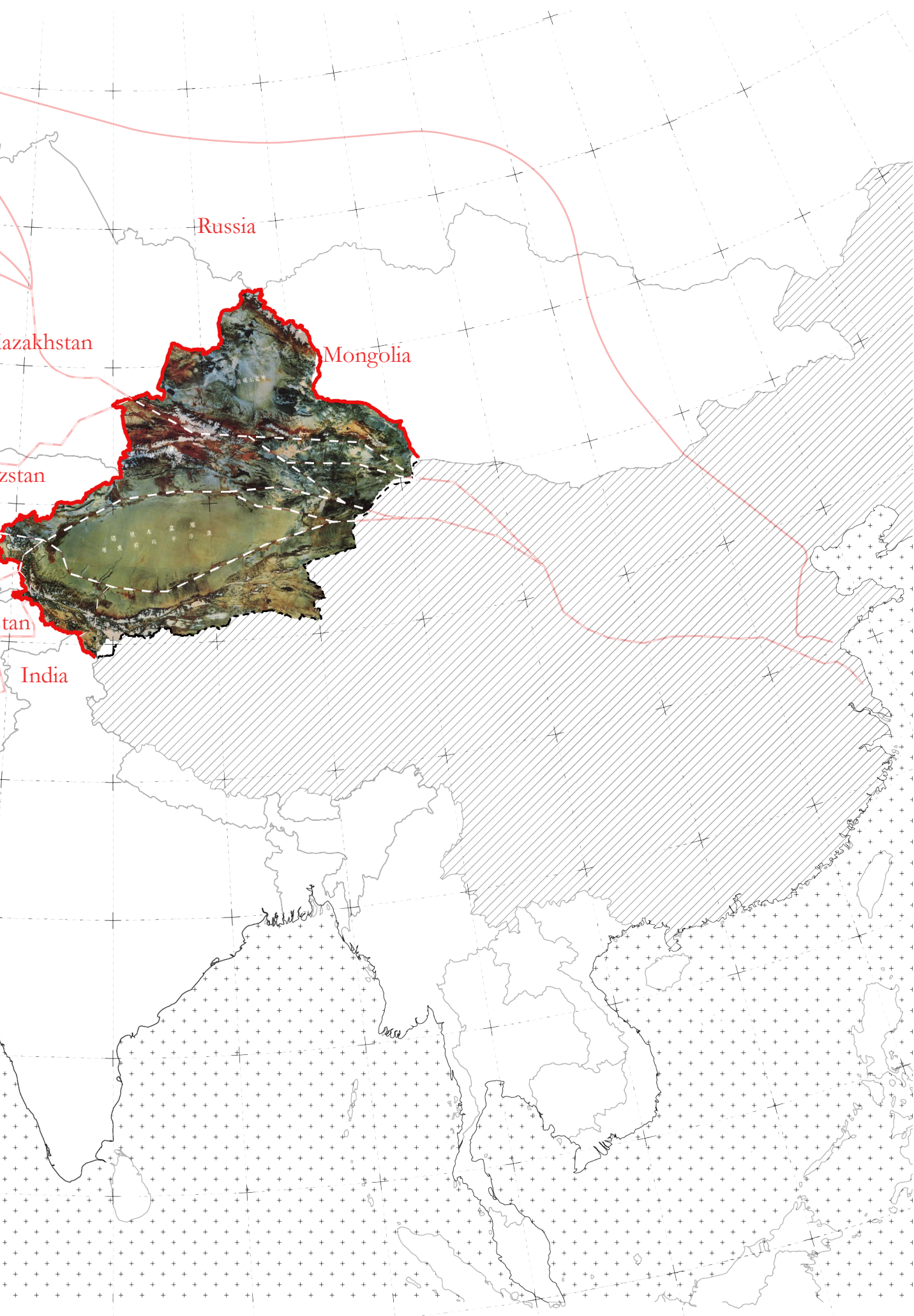
*From the Silk Road to Belt Road Initiative (BRI)*

Xinjiang is the most western region of China, bordering 8 countries and over twice the size of France. It is both the gateway and buffer zone to Central Asia, geographically defined by enveloping mountains and desert heart.

The “strategic invisibility” of desert spaces accommodate the pursuit of activities out of public view and beyond the realm of judicial and civic oversight.



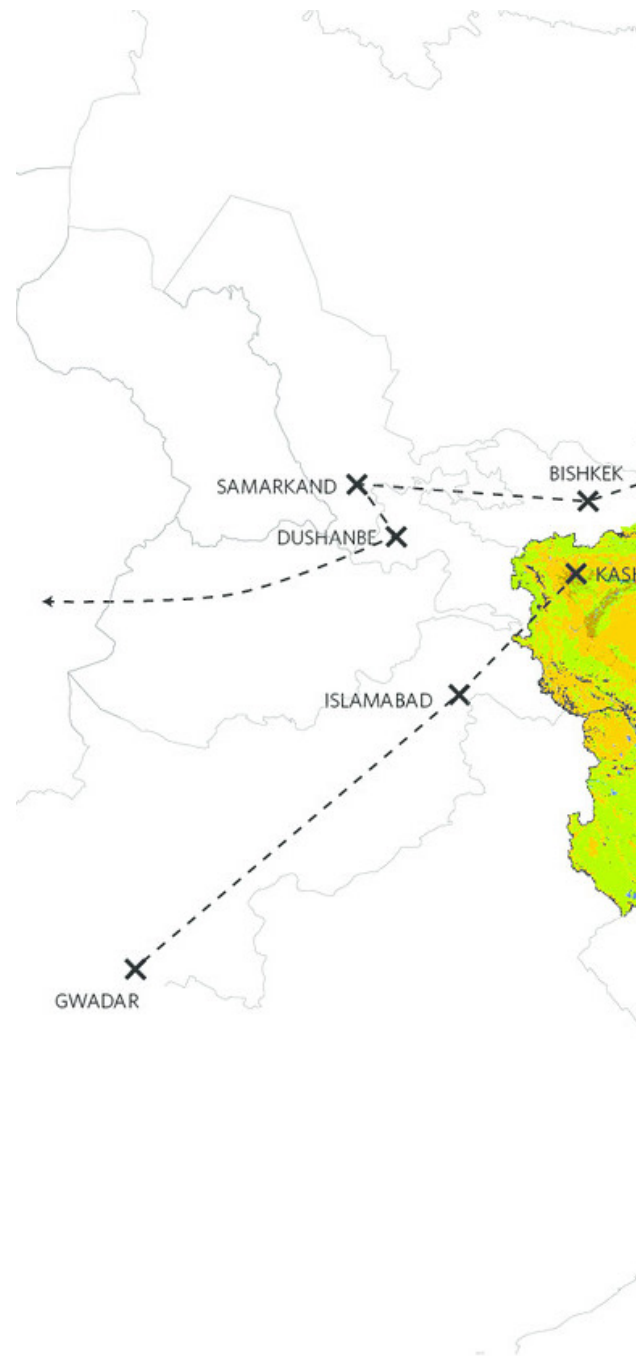






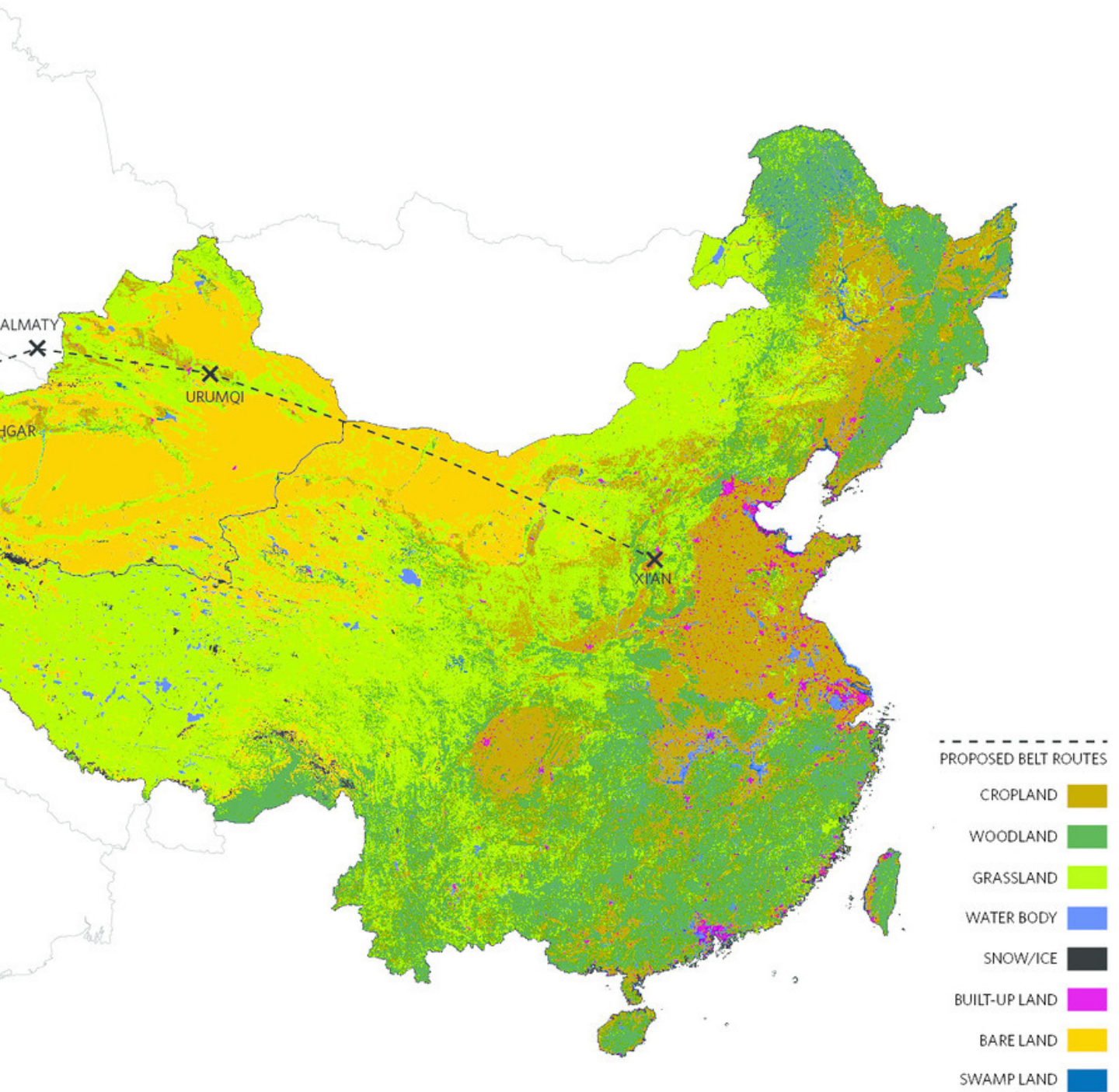
Between these zones lie the oasis towns and cities which constituted the ancient Silk Road and today hosts a major route in President Xi Jinping's Belt Road Initiative, the economic and infrastructure project strengthening trade between Asia, Africa and Europe.

It is a landscape rich in resources, and for that it is also one of exploitation and contention between newly settled Han Chinese and the indigenous, of which the majority are Uyghurs. From 2009 to 2014, Xinjiang was marked by violence as tensions reached a knife point. This resulted in a government clampdown on the Uyghurs to stamp out extremism and terrorism. However from a global standpoint, their methods look more like cultural genocide.



Two of the most central and lucrative Belt routes pass through this geography and “bare” land classification. Map data





proposed through China's mega-infrastructure project, The Belt and Road Initiative, rely on Xinjiang's strategically located from MODUS Global Land Cover dataset (2010) and the BRI maps produced by The World Bank Organization (2018).



## 1.2 The Need for a Lens

Because of this conflict, there has been an emphasis on not using discourse from the media to direct the investigation. Instead, the research adopted a forensic methodology that uses water as a reductive lens to filter information. It allows us to look for recurring phenomena or patterns in the architecture and infrastructure of the landscape

Why waters? According to urbanist Matthew Gandy water is “a brutal delineator of social power which has at various times worked to either foster greater urban cohesion or generate new forms of political conflict”[1].

Indeed in the desert landscape of Xinjiang, these issues are amplified. Thus water can reveal dispositions, clues knitted into the urban tapestry as it is extracted, stored, manipulated, commodified and privatised.



*Glacier water being extracted for agricultural use in Xinjiang*

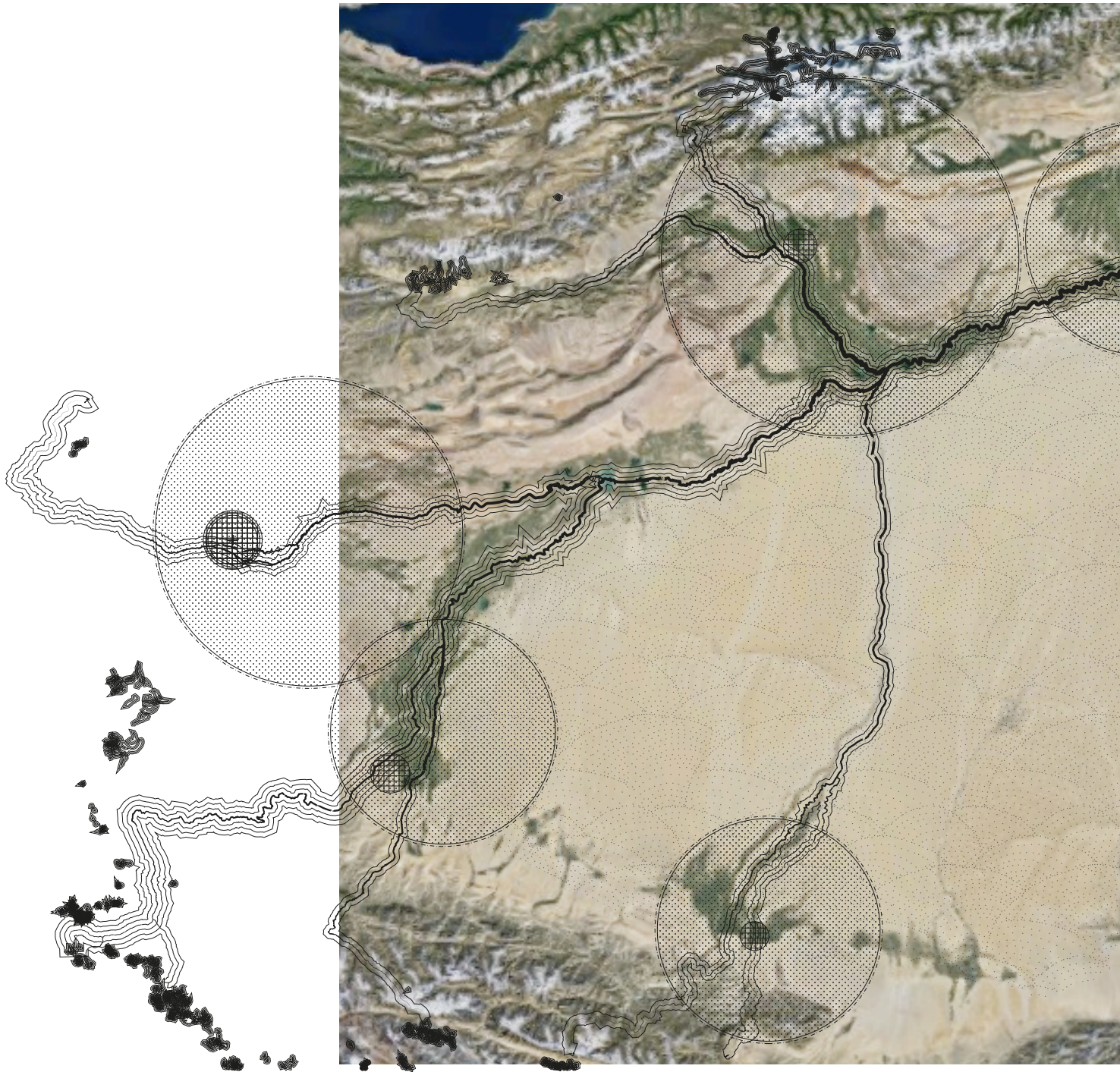




*Water is "a brutal delineator of social power which has at various times worked to either foster greater urban cohesion or generate new forms of political conflict"*

Matthew Gandy: Rethinking urban metabolism: water, space and the Modern city



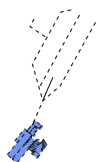


### 1.3 Tracing water

Fed by glaciers in the Tianshan Mountains, this source of freshwater traverses across the length of the region flanking the desert bowl before drying up in the endorheic basin..

Revealing with it a system of oasis towns and their eternal dependency on the Tarim River.

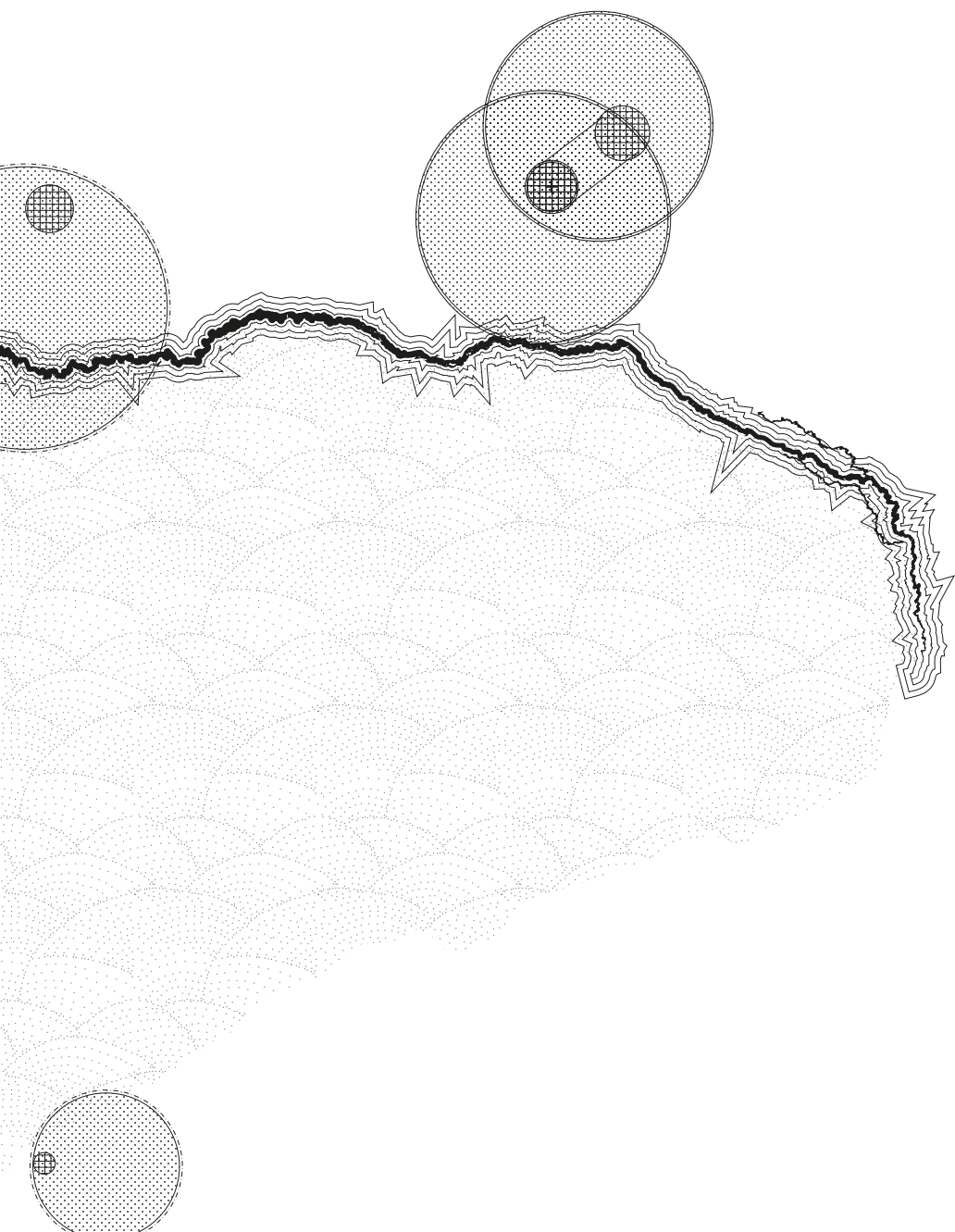
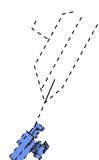




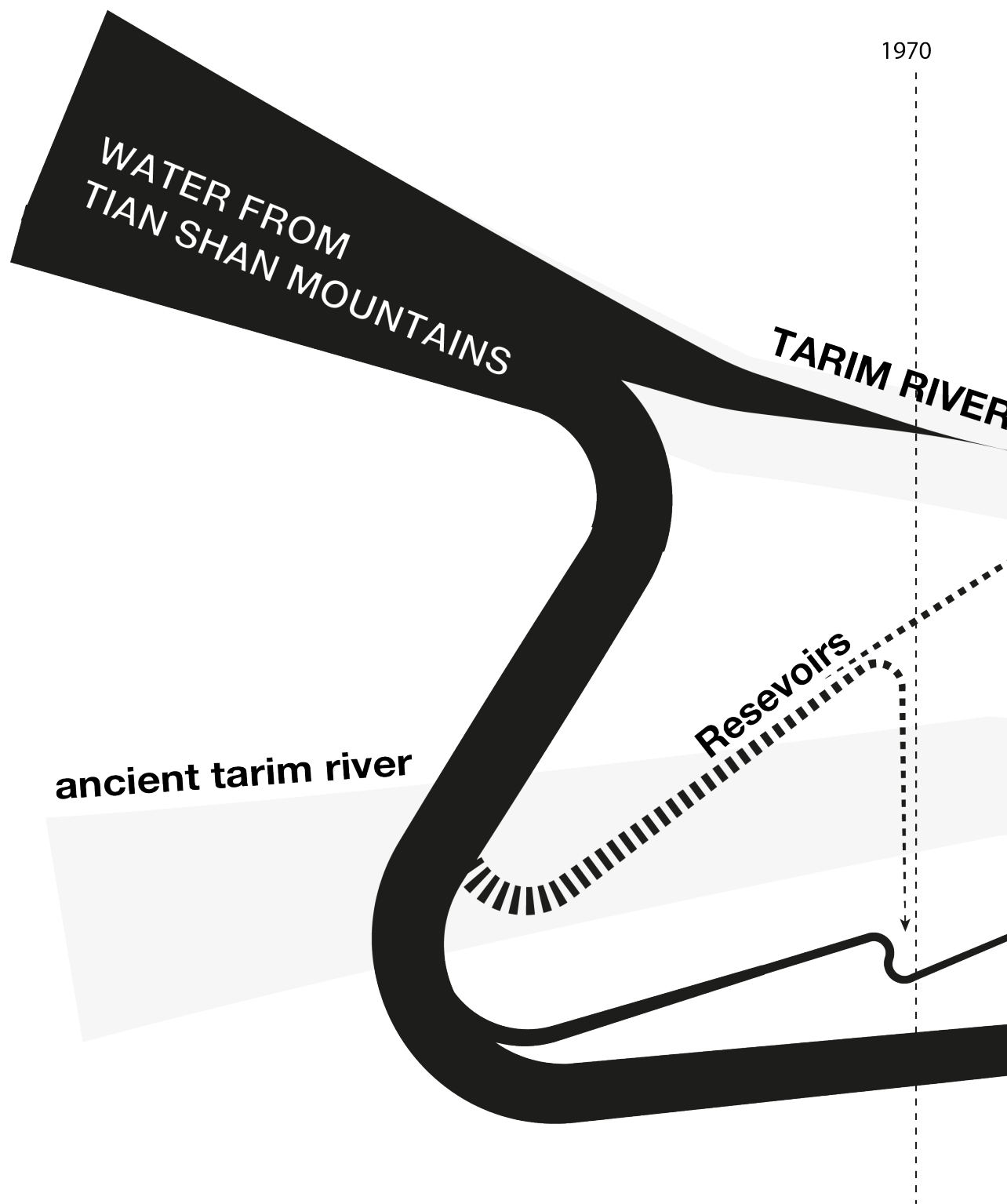






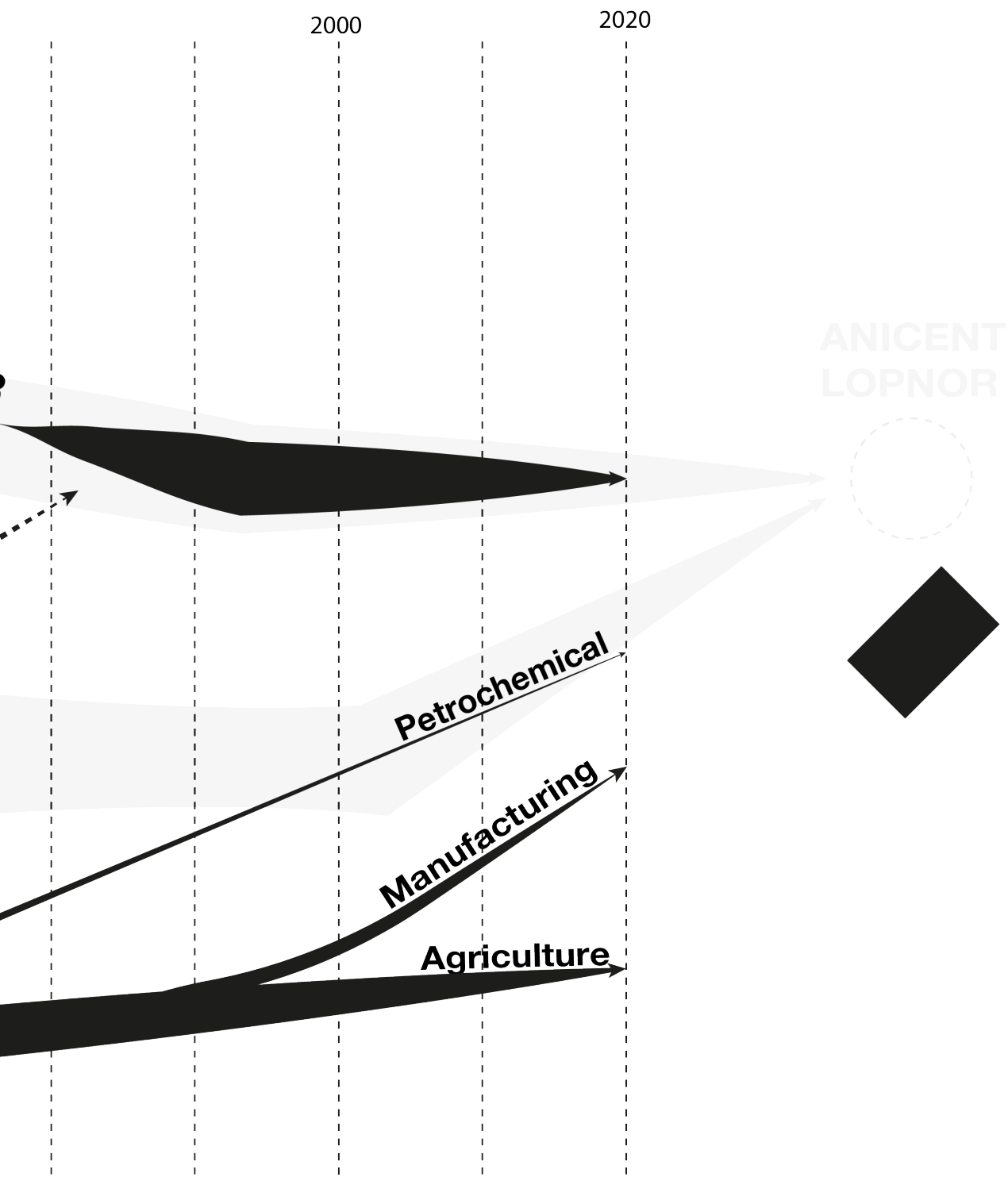






The modern history of the Tarim River reinforces this situation, this dependency. The River dried up in 1970 after being aggressively diverted for industrial needs with the largest going towards Agriculture. Since then, the river is recharged 3 times a year by reservoirs which simultaneously take from it. Emphasizing how the success of civilisations is bound with its course.





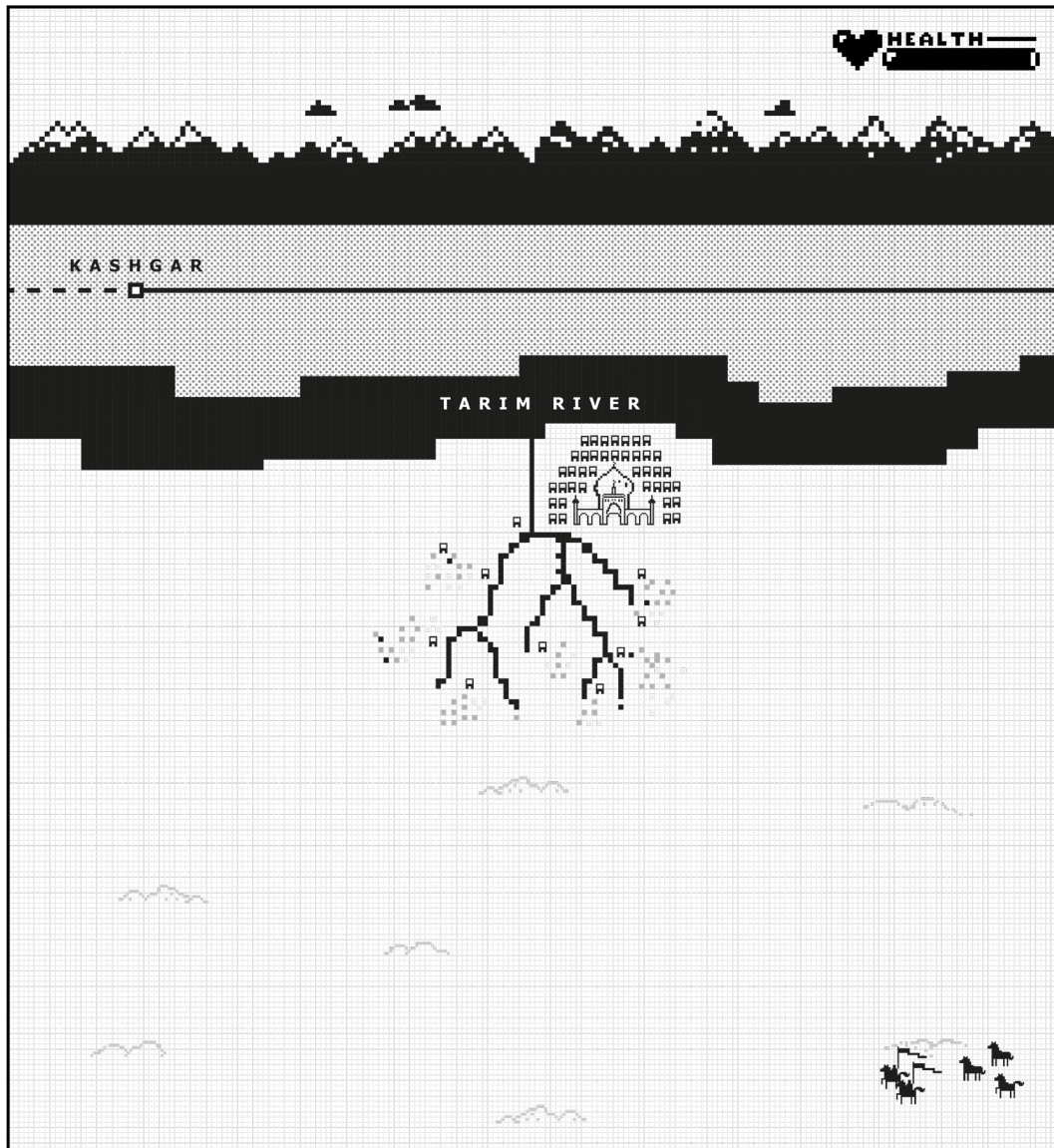
Tarim Oilfield Company dismantled 30 oil and gas production facilities in 2018 and will shutter 34 wells by 2020.



Over the course of a half-century, the mass immigration of Han Chinese to Xinjiang, under the CCNP's policy of Hanification, has added pressure on water sources. In Tom Cliff's book: *Oil and Water being Han in Xinjiang*, he identifies three main players which have settled in the Xinjiang region each with a different approach in the way water is used to create their urban environment. These differences represent the game of rapid modernisation through the means of industrialisation: a game of creation and destruction.



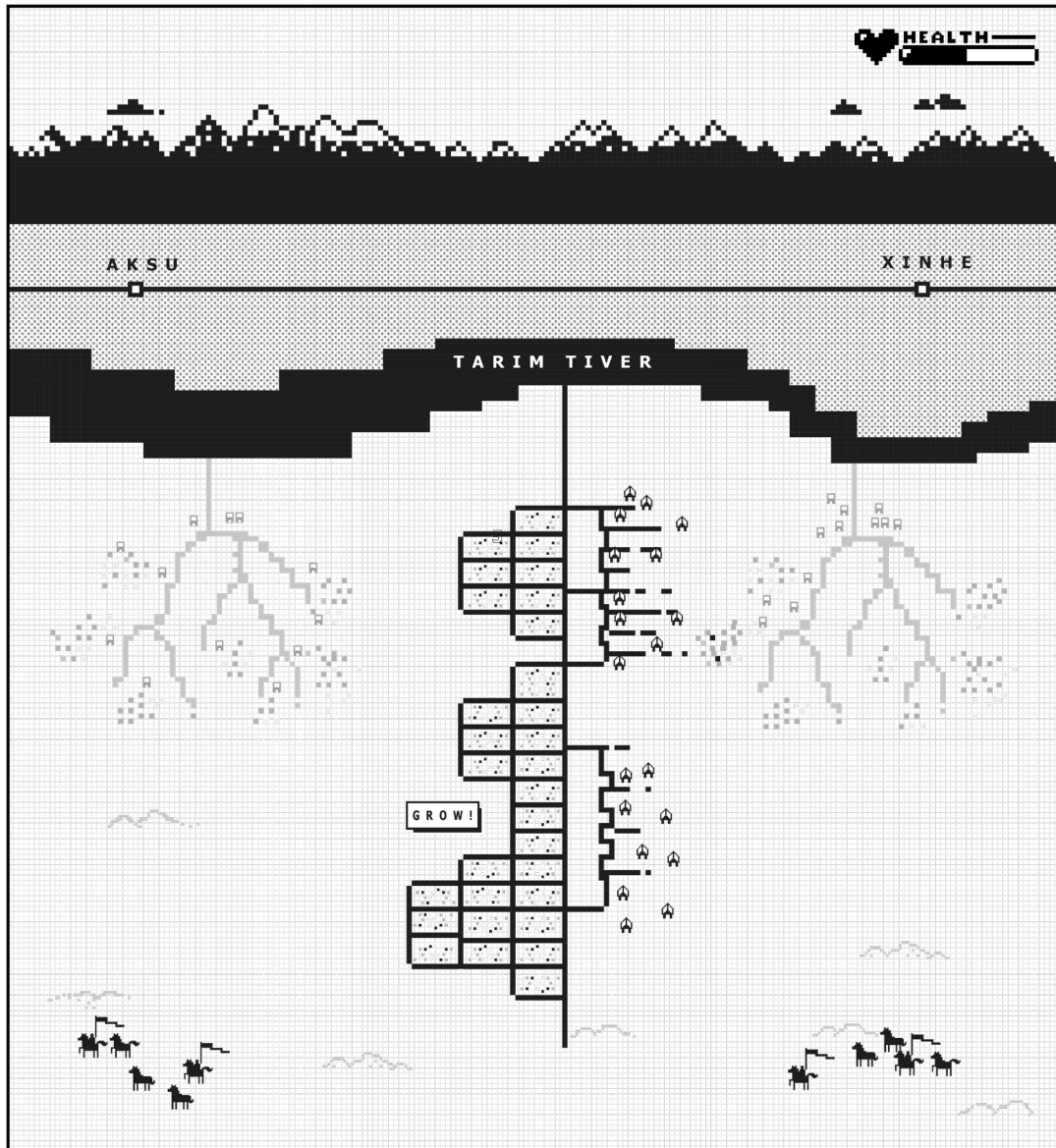




The ancient oasis towns of the silk road, inhabited by a predominantly Uygurs (majority-minority Muslim Chinese sharing close ties with the Turkistan) historically used the ephemeral flow of the river alongside a well and tunnel system called the karez to succeed at the desert periphery.

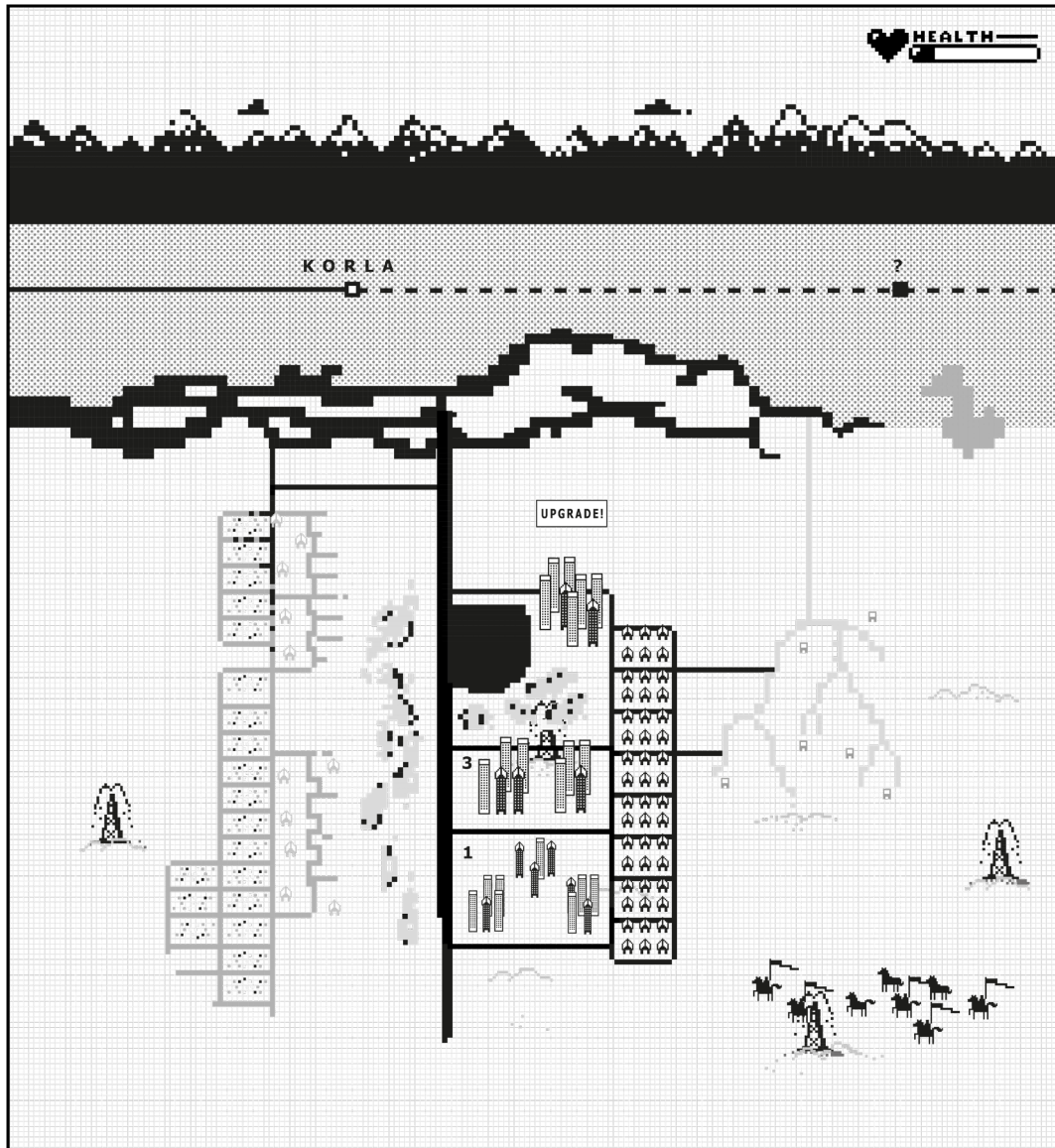


Xinjiang  
Production  
and  
Construction  
Corps (XPCC)



XPCC has embarked on a “developing the south” campaign to speed up building cities and factories in southern Xinjiang, where the population has been predominantly Uyghur

This dramatically differed with the long and straight canal systems of bingtuan settlements, the quasi-military entity sent west by the Chinese National Party to promote economic development in Xinjiang aka “the West Frontier” by settling through means of agriculture.



In complete contrast, the China National Petroleum Corp (CNPC) uses water as a means of status in the design of their compounds. These areas are typified by enlarged canal systems and water parks achieved by diverting water away from oasis towns, whilst simultaneously competing with bingtuan.

Using this lens of water reveals the conflicting dynamics of different stakeholders, which would otherwise be invisible to the eye.



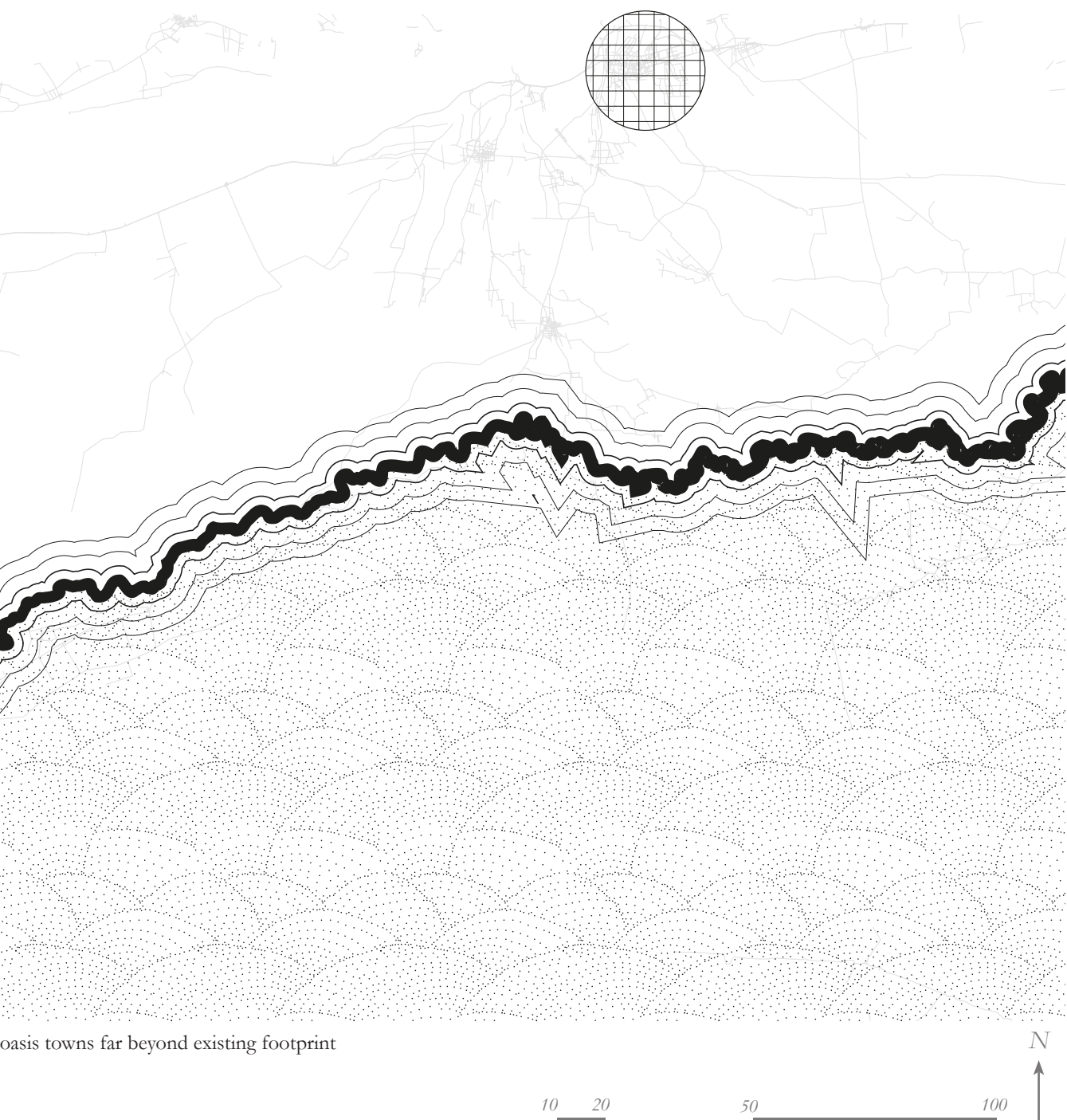




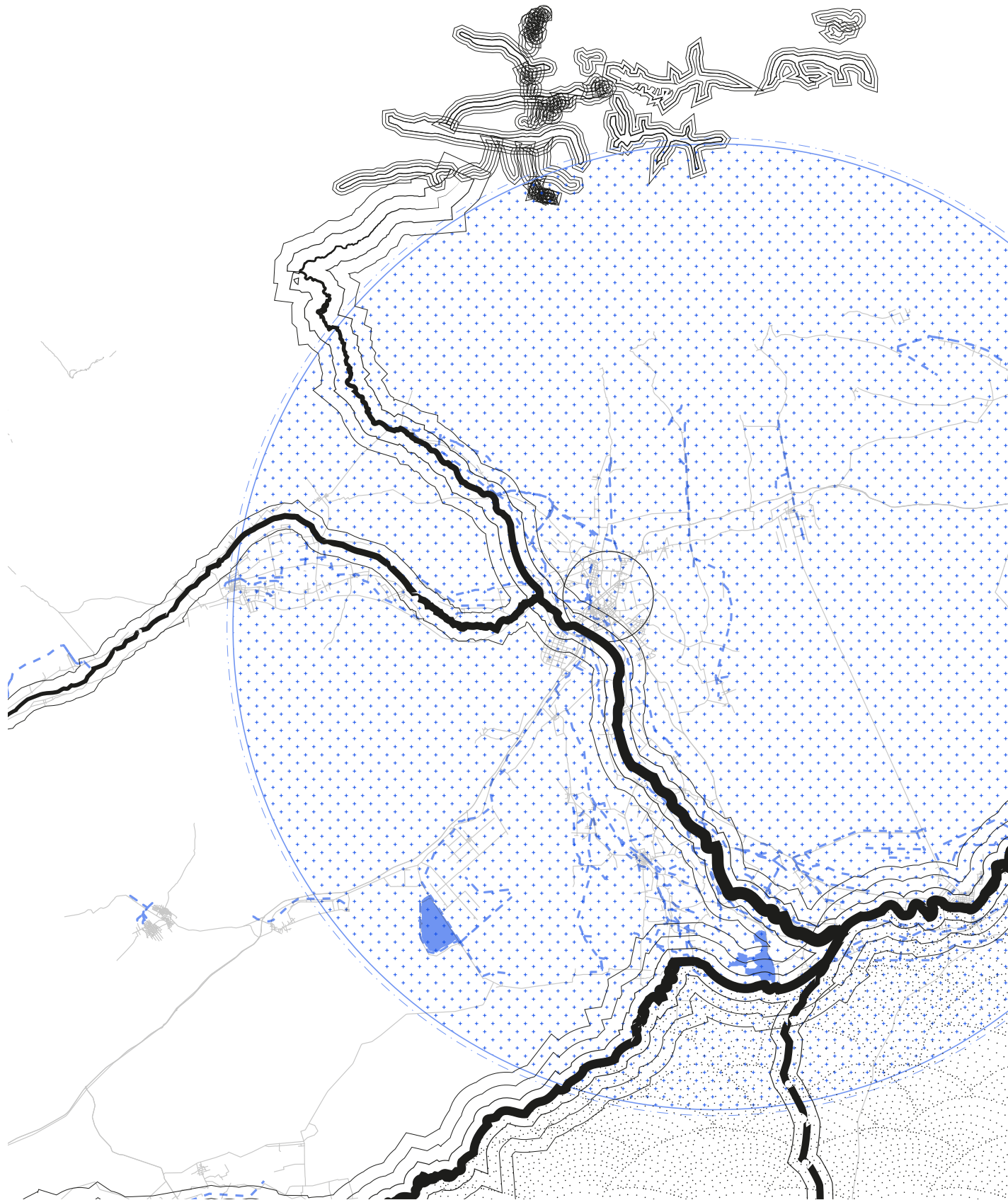
Oasis Expansion: Canal systems extend

By discerning the difference between natural and man-made flows...





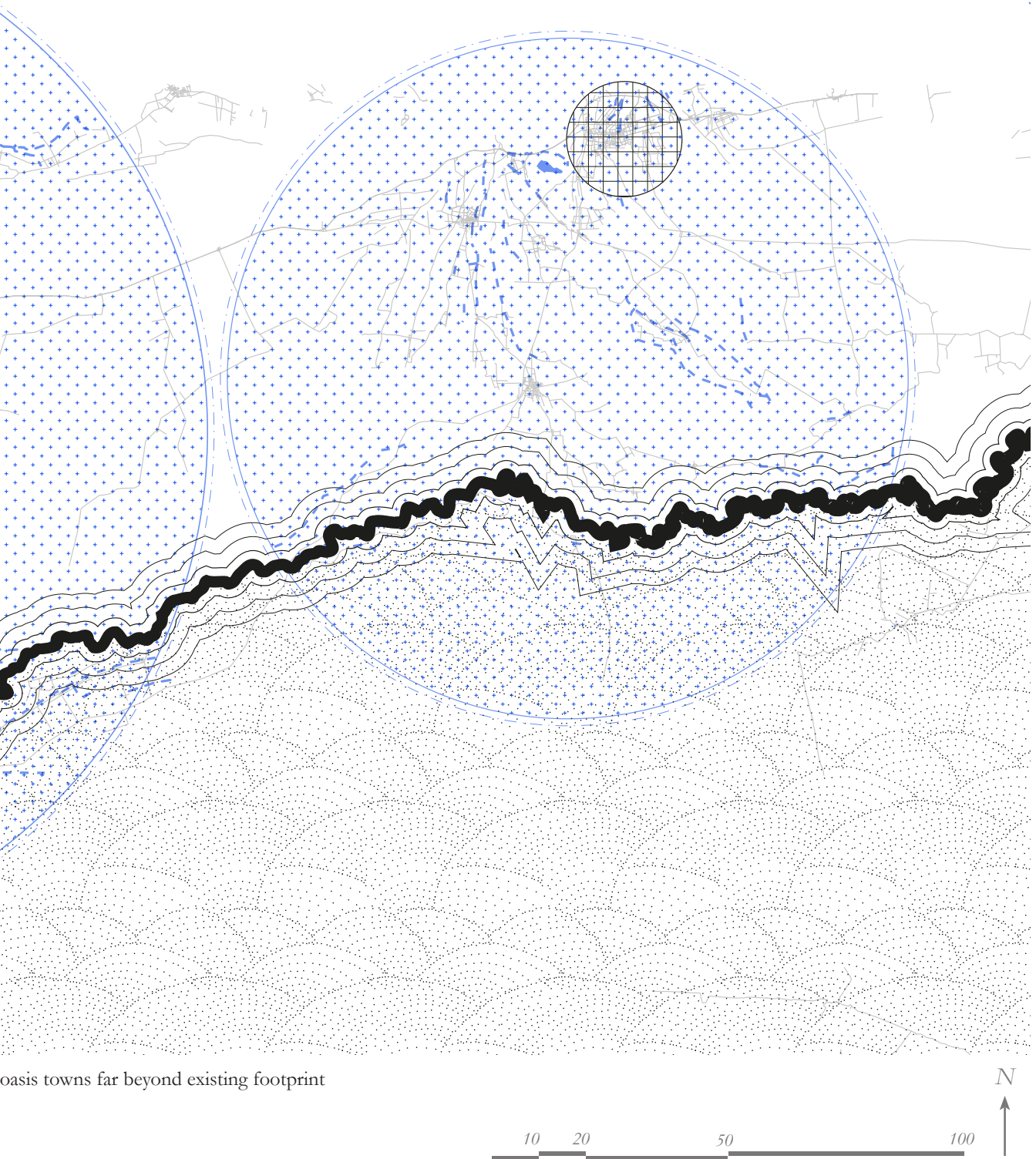
oasis towns far beyond existing footprint

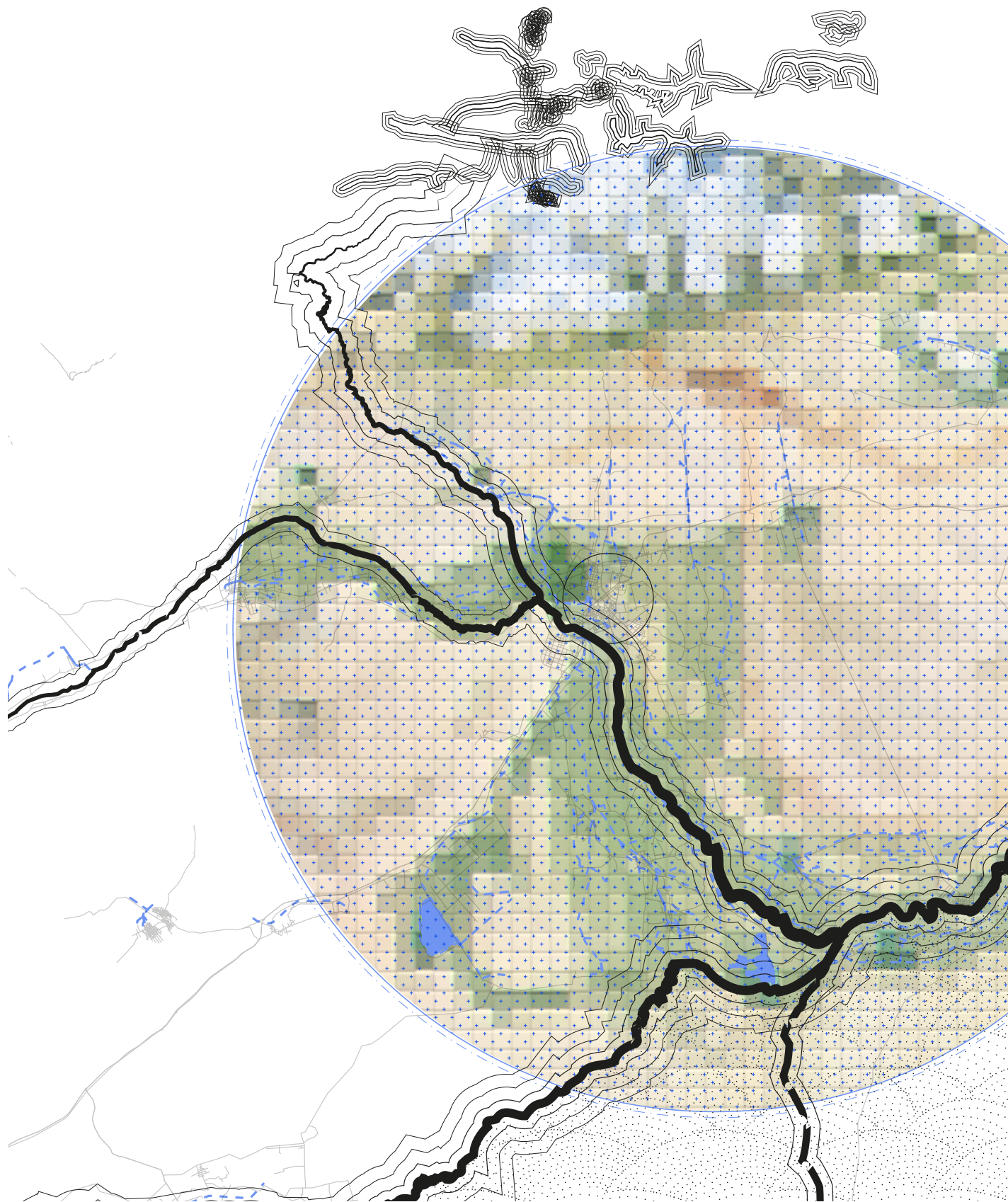


...we can see how oases have expanded far beyond their original footprints and the extent to which agriculture...

Oasis Expansion: Canal systems extend



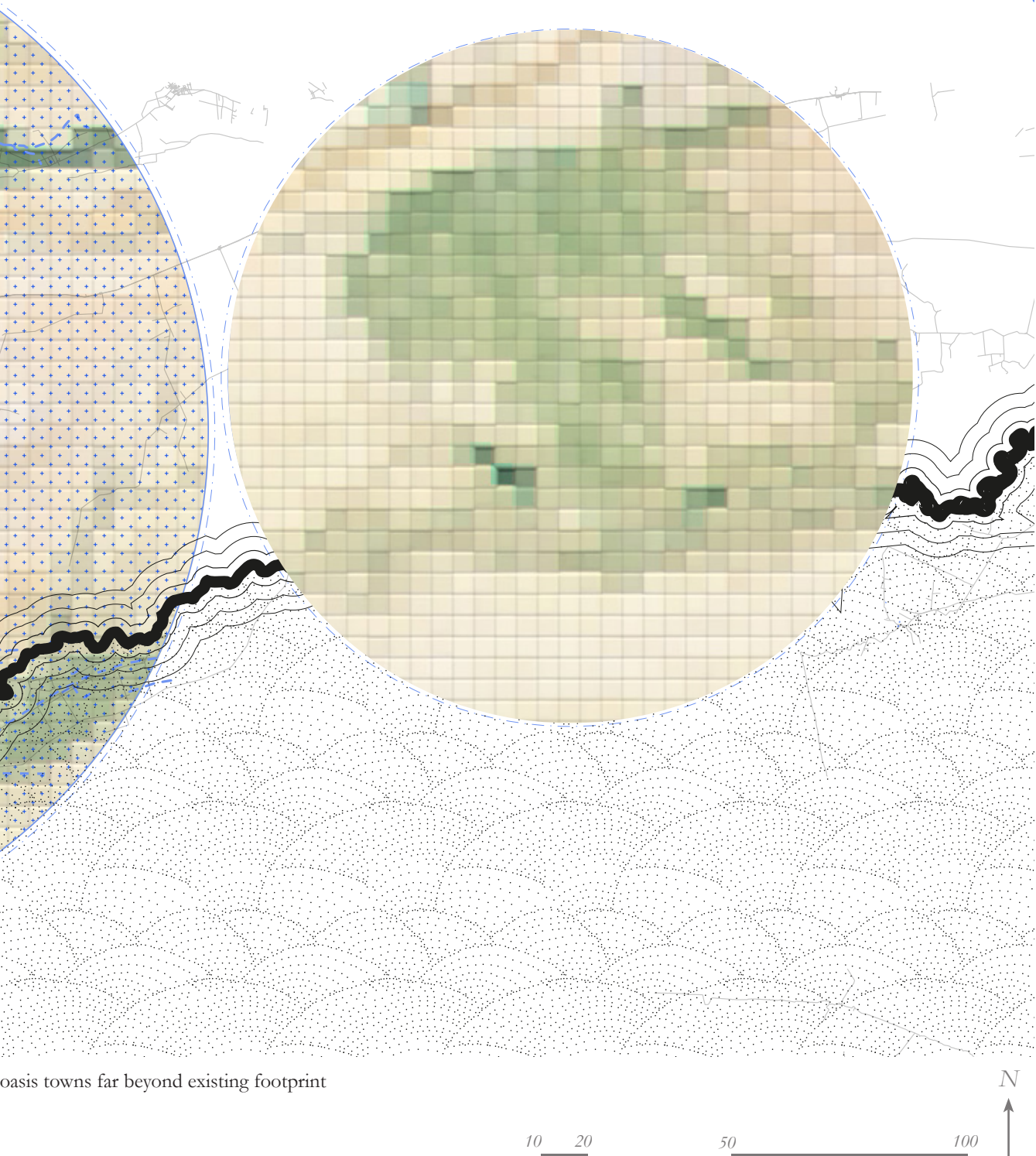




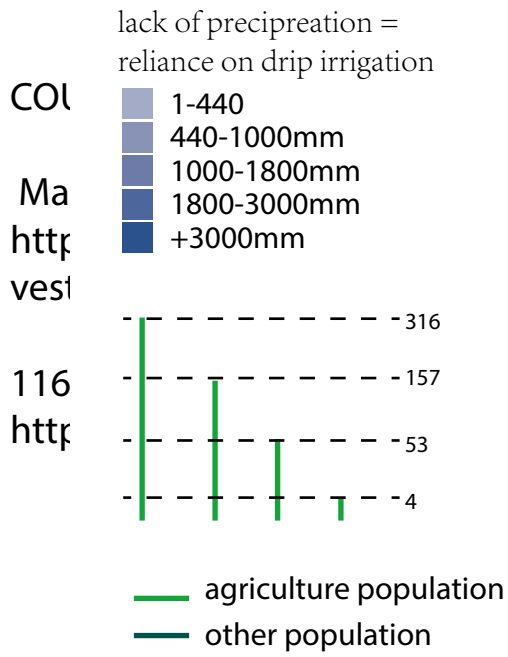
Oasis Expansion: Canal systems extend

...dominates the landscape and economy of the desert periphery.





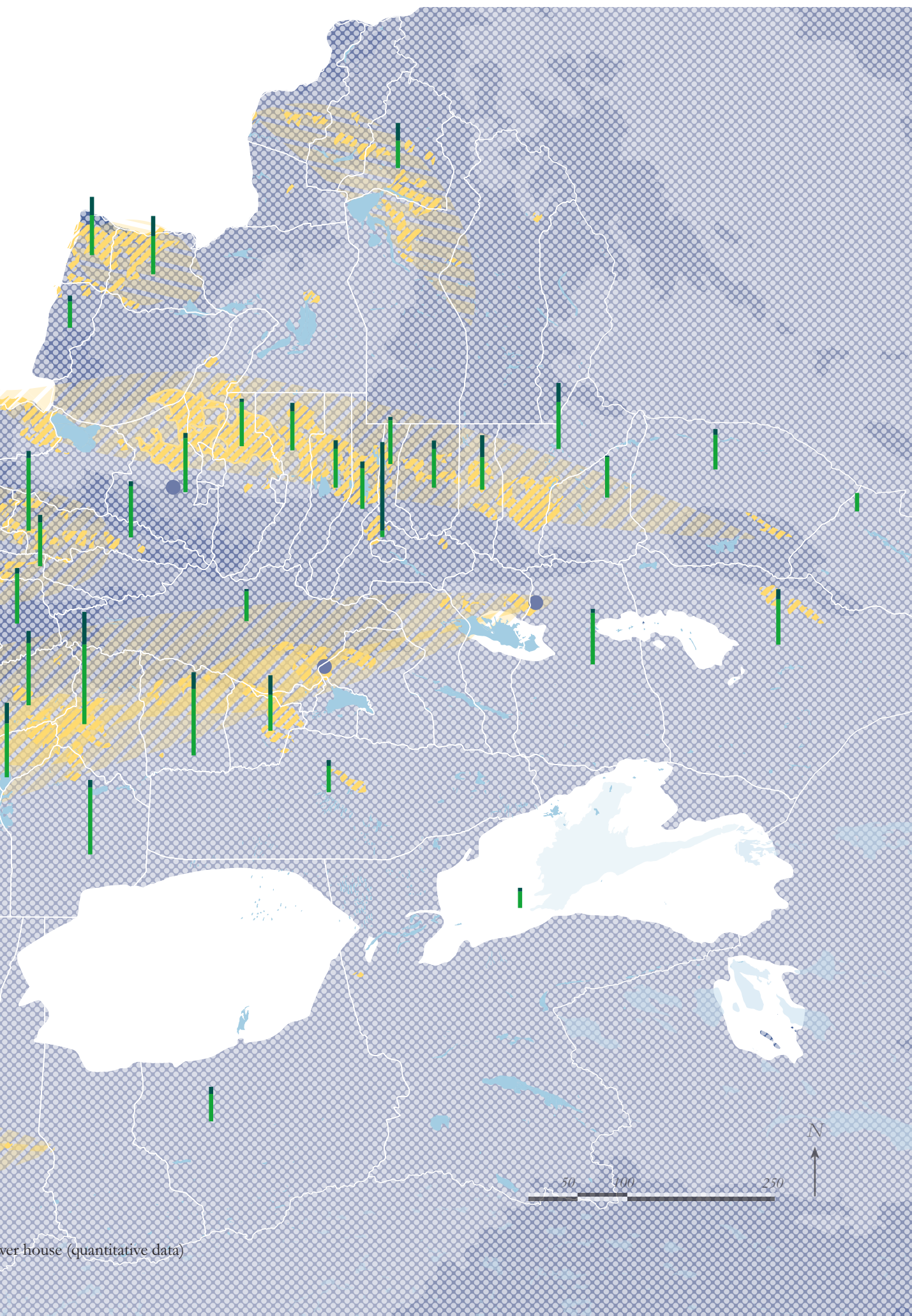
oasis towns far beyond existing footprint



Since the 1950s with the aid of modern infrastructure, the amount of arable land has almost tripled.

Indeed, This notion of Xinjiang as an agricultural powerhouse is underscored when you analyze how many within the population rely on agriculture for work.

Xinjiang: An agriculture power



ver house (quantitative data)



*What is be*

Xinjiang is self-sufficient in food. The crop area produces winter and spring crops. The most important crop, is grown more in the north. Kaoliang (a variety of grain sorghum) is grown in large quantities. Significant cotton is produced in the Turfan Depression. The silk and cotton has become an important industry of China's main fruit-producing region. Seedless Turpan grapes, fragrant pomegranates are well known. Sugar beets supply the sugar industry in north

<https://www.britannica.com>

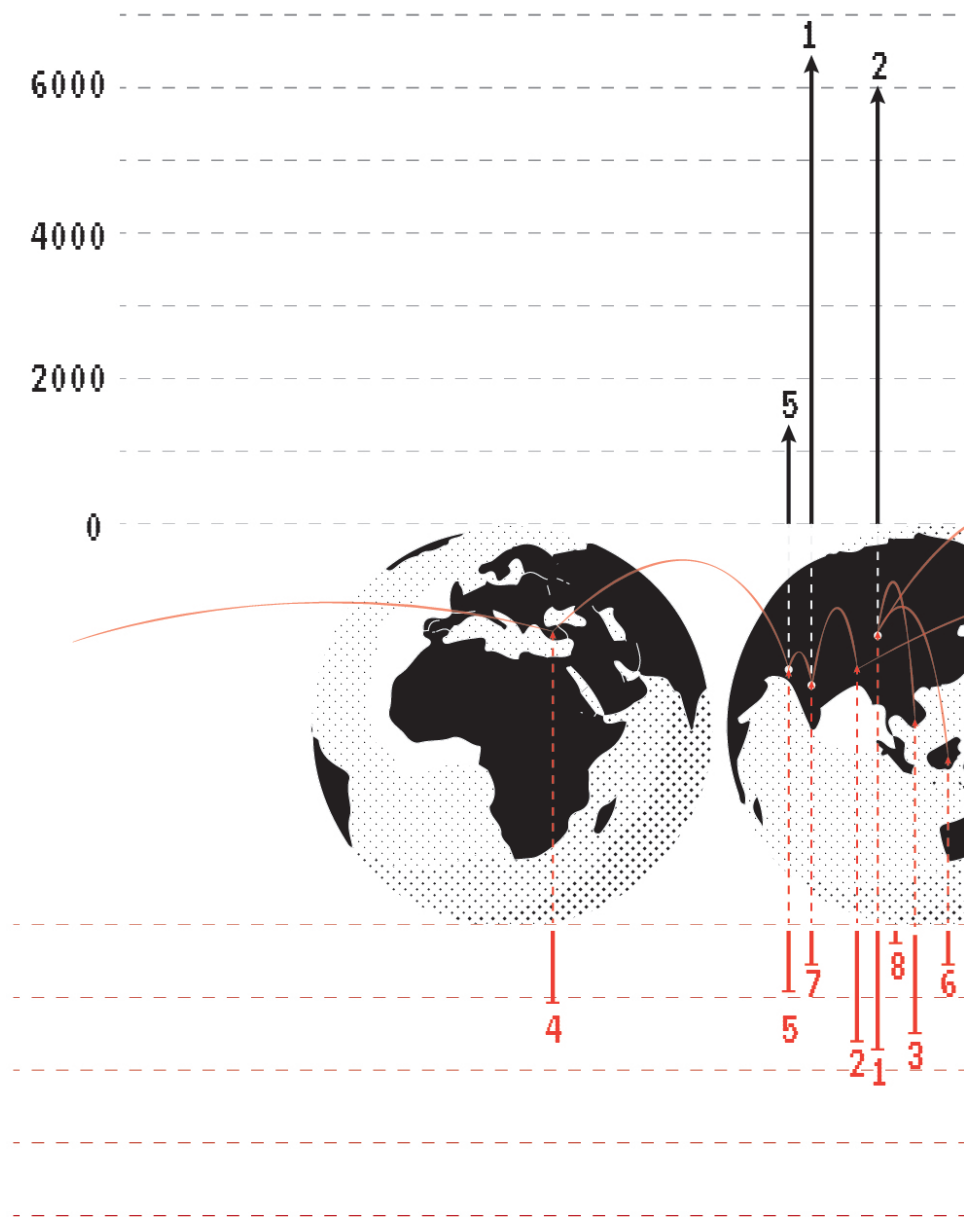
But what is being grown? Out of all the crops grown in Xinjiang, the presence of the cash crop, cotton in the Tarim Basin, is perhaps the most intriguing because of its global influence.

Control a

*being grown?*

d grains. About half of the total  
ring wheat. Corn (maize), another  
the south than in the north. Rice,  
(um), and millet are also produced  
crops of long-staple cotton are  
ion and the greater Tarim Basin,  
ortant cash crop. Xinjiang is one  
regions; its sweet Hami melons,  
Korla pears, and crisp Ili apples  
port an important sugar-refining  
hwestern China.

n/place/Xinjiang/Economy



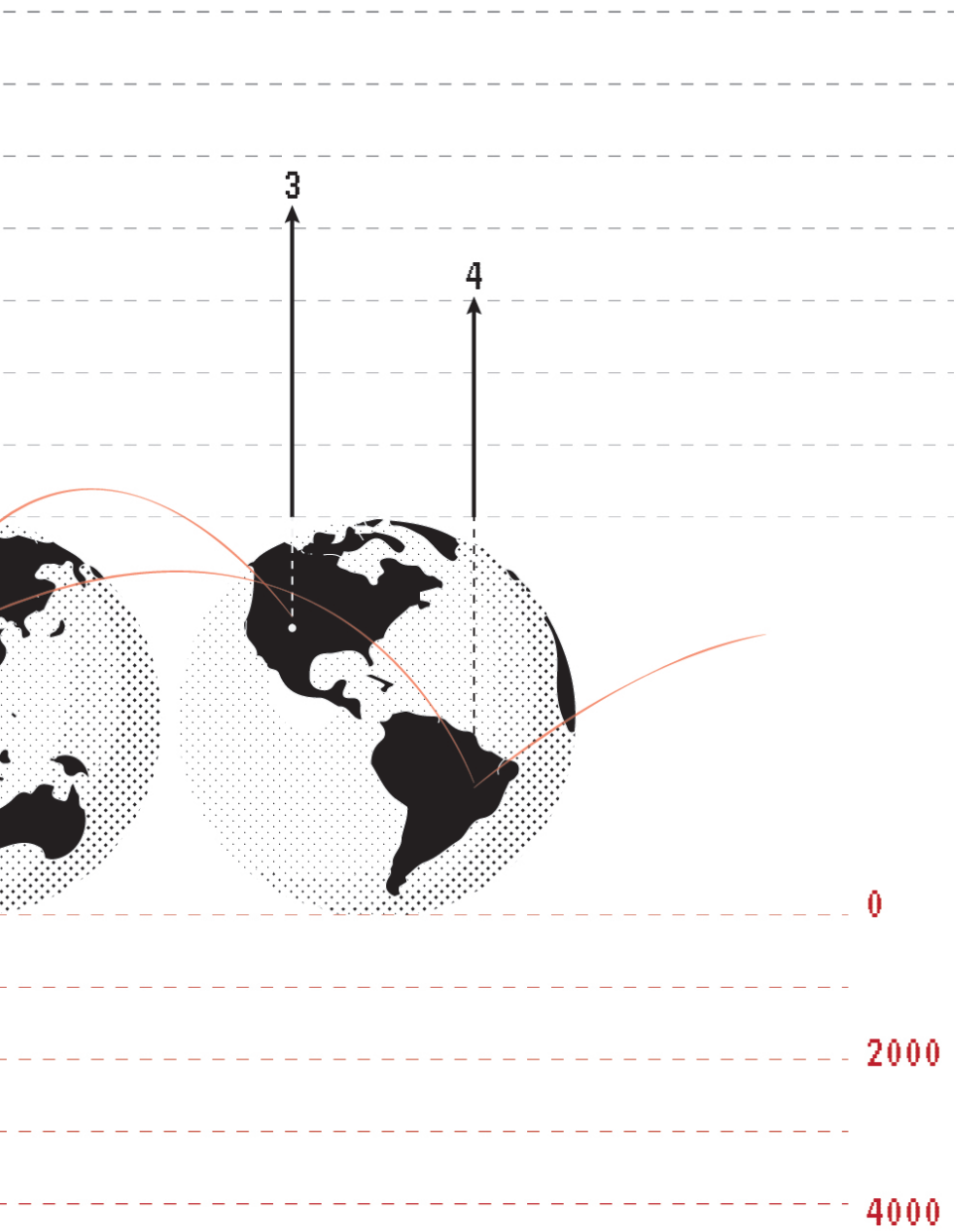
Leading cotton producing countries worldwide in 2019/2020

- |           |               |
|-----------|---------------|
| 1. India  | 5. Pakistan   |
| 2. China  | 6. Uzbekistan |
| 3. USA    | 7. Turkey     |
| 4. Brazil | 8.            |

China's global co

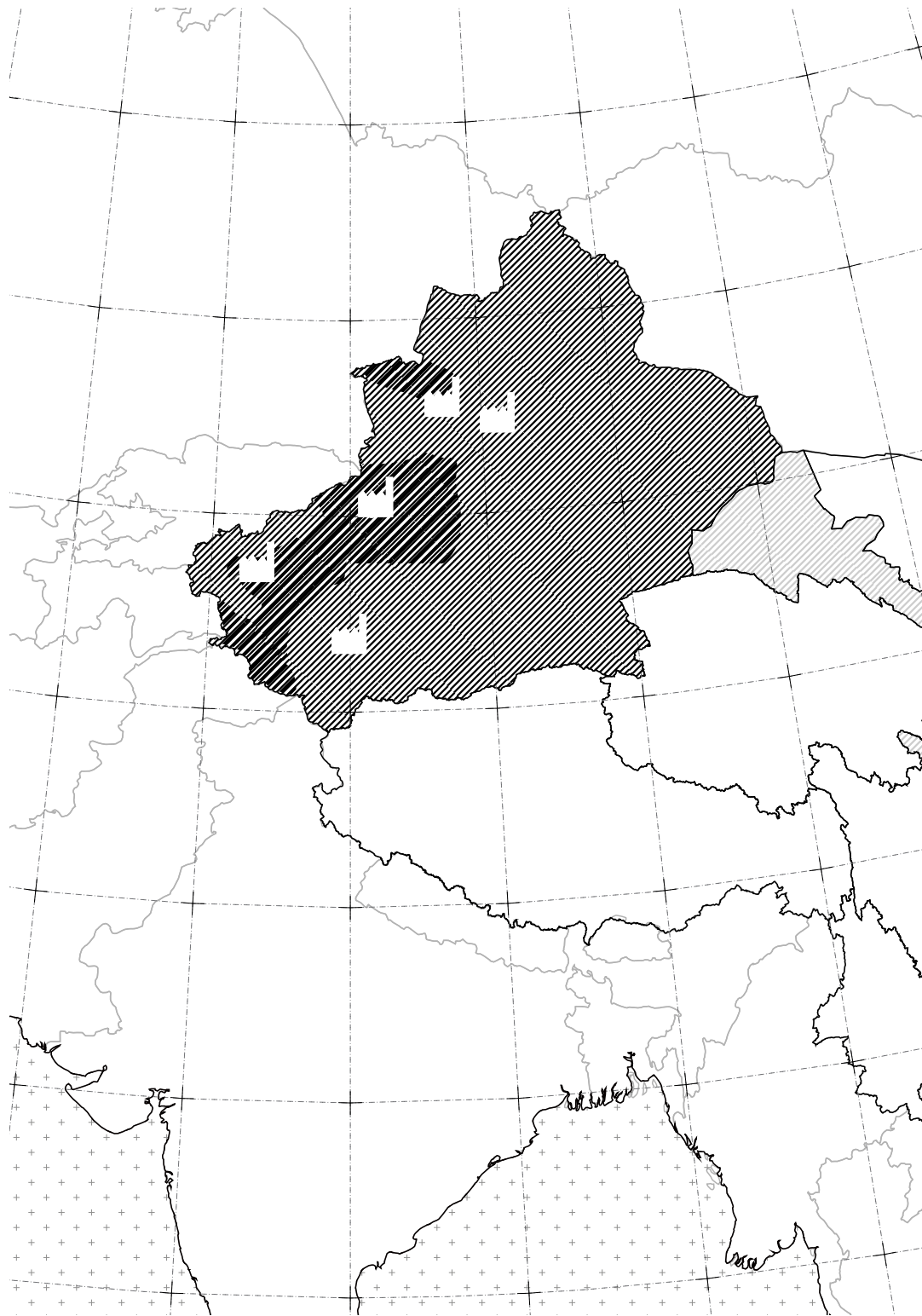
On a global scale: China is one of the top producers and importers of cotton.



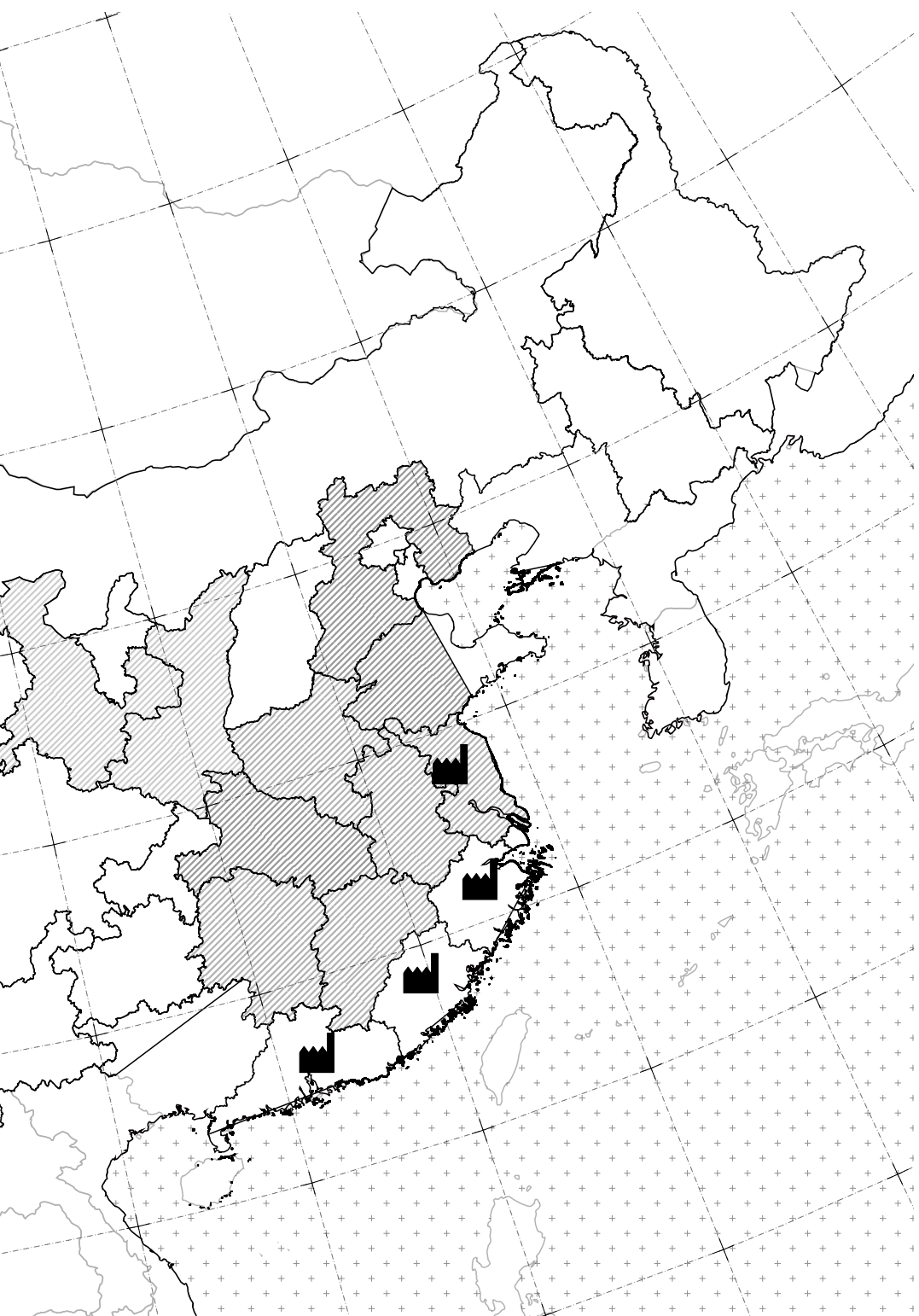


Leading cotton importing countries in 2019/2020

- |               |              |
|---------------|--------------|
| 1. China      | 5. Pakistan  |
| 2. Bangladesh | 6. Indonesia |
| 3. Vietnam    | 7. India     |
| 4. Turkey     | 8. Malaysia  |



It turns out Xinjiang produces over 84% of this cotton making it the most productive region in the world. The resulting success has encouraged textile industries, historically located on the east coast, to move westwards, to the source of agricultural production, indicating Xinjiang as China's new textile hub.



factories move East to West



This is why 1 in 5 cotton items can be traced back to Xinjiang

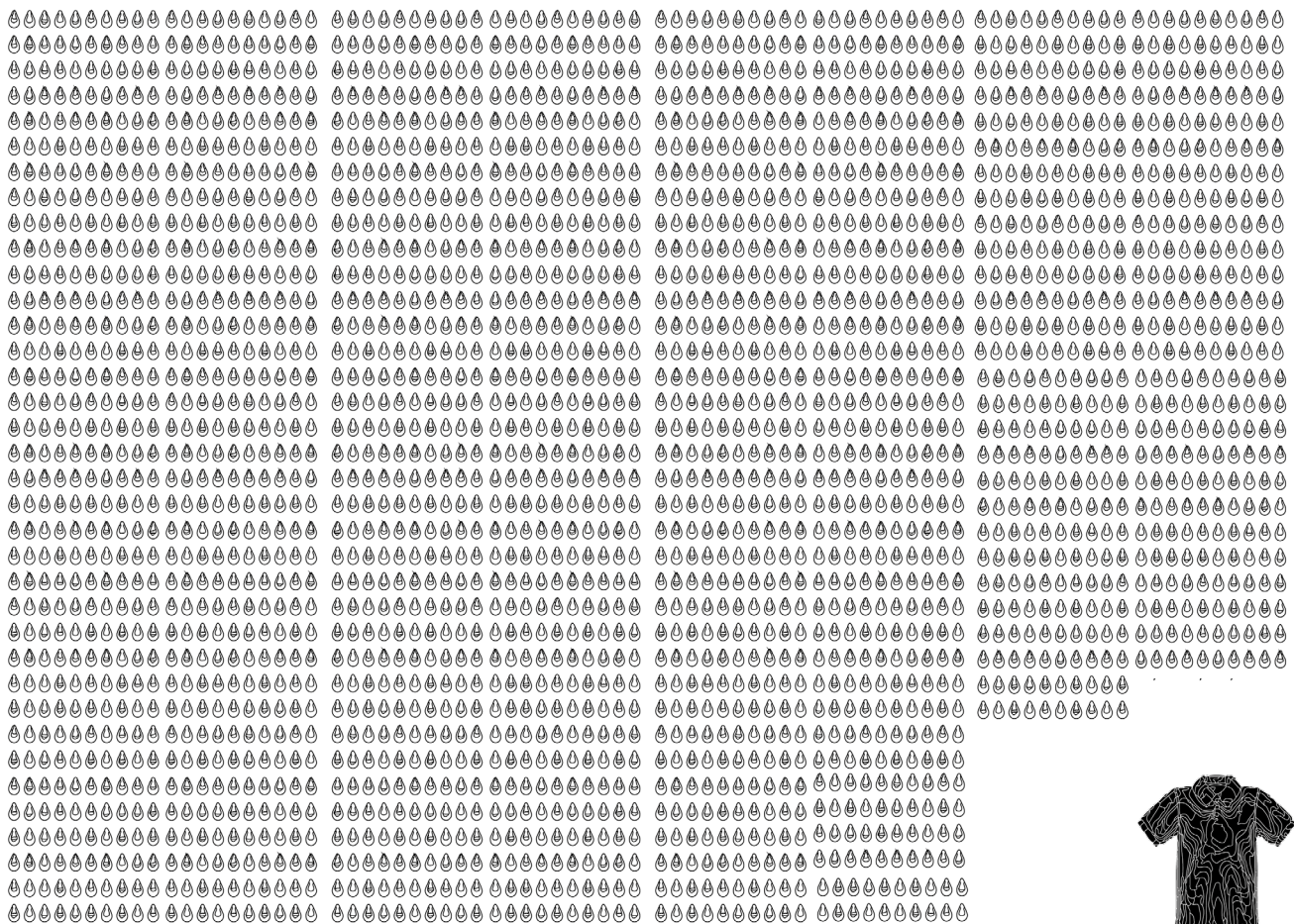
It is a classic example of capitalism. Profit-driven by exploitation of natural resources. But paradoxically, the world's most productive region for cotton, a notoriously water-thirsty crop, (2700 for 1 tshirt) is situated in the Tarim Basin of which (and I quote) over 1/3rd faces 'extremely high' water stress.

Pervasive and Insidious: 1 in 5 cotton products in the world can be traced to the production region of Xinjiang (GlobalData, 2020).

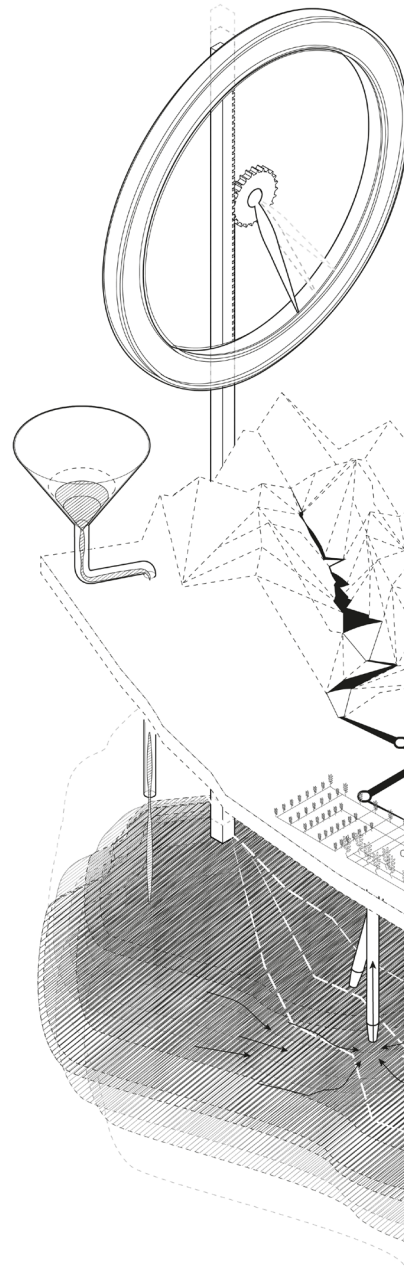
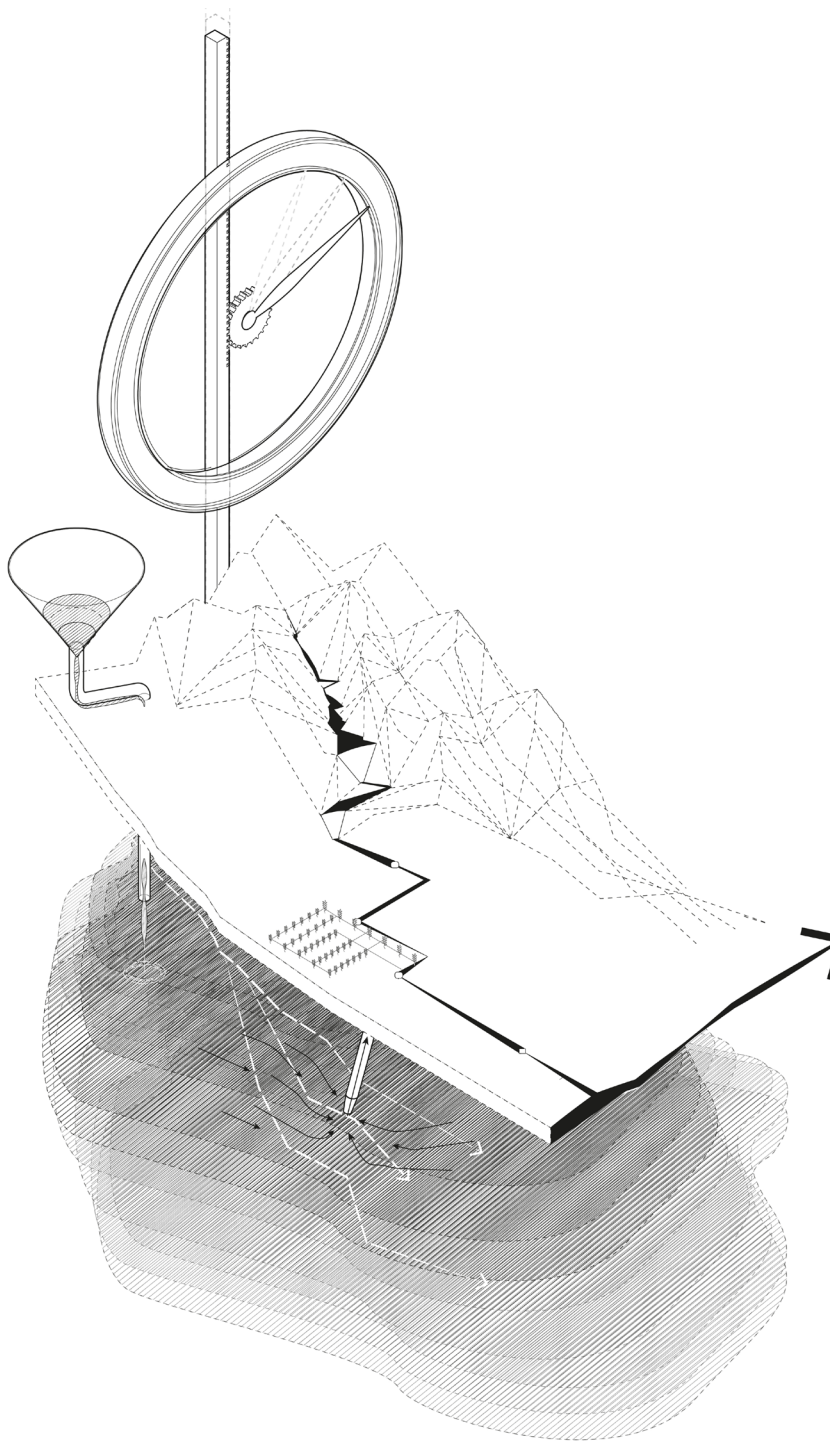


T-shirt. PPE Masks. Sanitary Items. Makeup wipes. Pillow Covers. Duvet Covers. Bed Sheets. Coffee Filters. Denim. Flannel. Canvas. Damask. Socks. Underwear. Book Binding. Home Furniture. Curtains. Rugs. Upholstery. Cotton Seed. Fish Nets. Medical wipes. Cotton ear buds. Cotton Balls. Hospital Gowns. Wound Dressing. Insulation. Backpacks. Hats. Oven Mitts. Placements.

## 1 Tshirt = 2700 litres of water

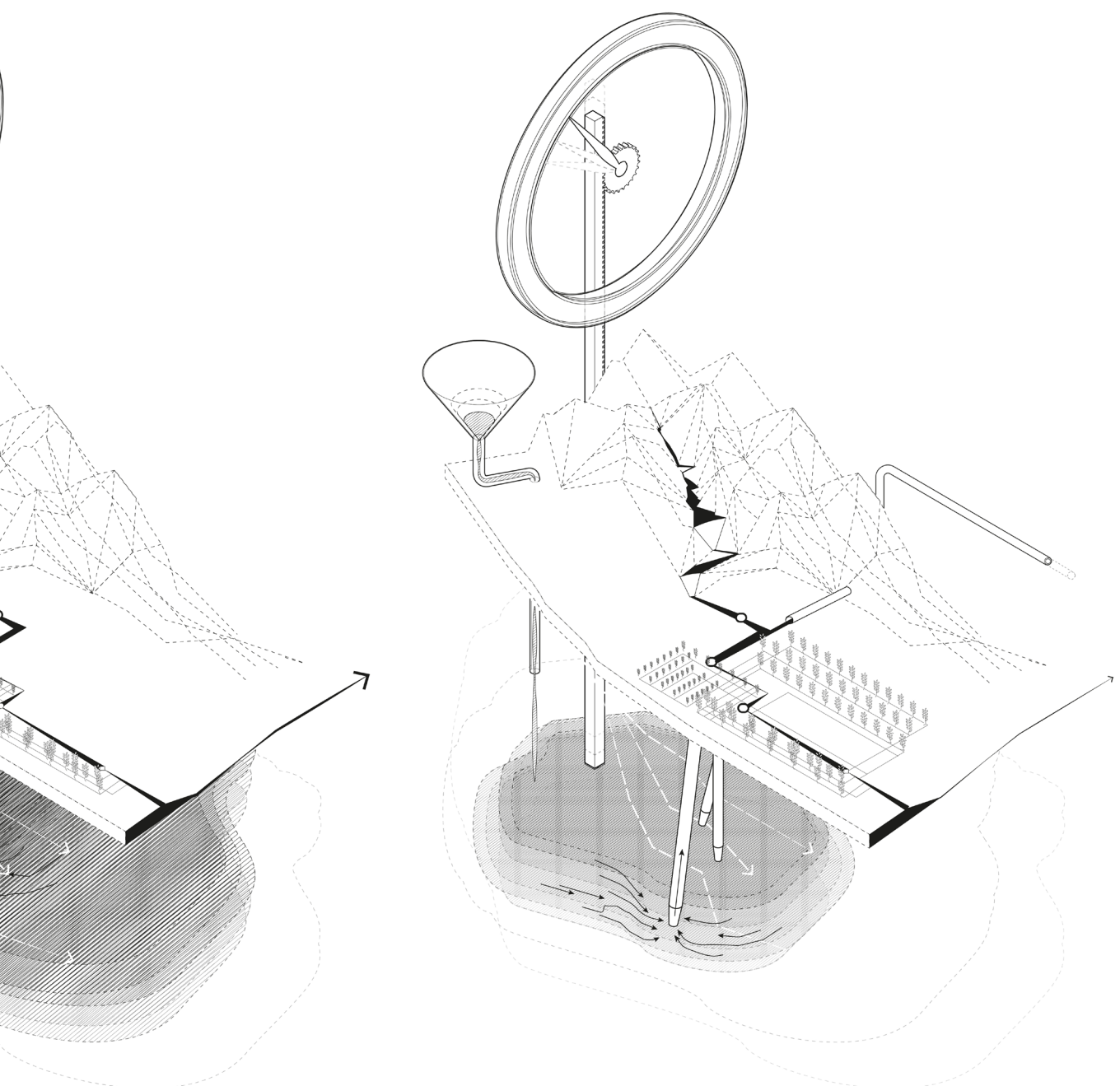


Paradox: Over a third of the Tarim River Basin faces 'extremely high' water stress (China Water Risk, 2017)



So, yes from above cotton blooms in the desert. Yet over half a century of successful industrial farming has diminished groundwater supplies. In fact, the entire process has completely ignored the environmental limits being situated at a desert periphery. Moreover, scientists believe within 50 years half of the glaciers which feed the Tarim River will have disappeared, casting uncertainty for the future of agriculture and civilization in the region. In our lifetime. See them while they last.





# *No 1 Glacier*

## *Xinjiang Tianshan*

*See it while*









1.

*Research: We*

*Who has a st*

3  
*Leaving Powers  
wake in cotton?*



<https://www.xabusiness.com/china-stamps-2014/2014-24-3-31-1>  
<http://en.people.cn/90002/92362/>

## 1.4 Weaving Powers

Who has a vested interest in cotton? Who are the key stakeholders? One of the key players is “bingtuan”. As aforementioned, it is a quasi-military organization established by then-Communist Party Chairman Mao Zedong in 1954 with a mandate to stabilize the volatile Xinjiang region by establishing agricultural settlements. As a collective enterprise, it controls interests that comprise nearly 17 percent of Xinjiang’s economy and whilst it is part of the State it operates under its own administration, creating its own special laws beyond the realm of judicial and civic oversight.

Cottoning on: The  
 “Xinjiang Production and Const





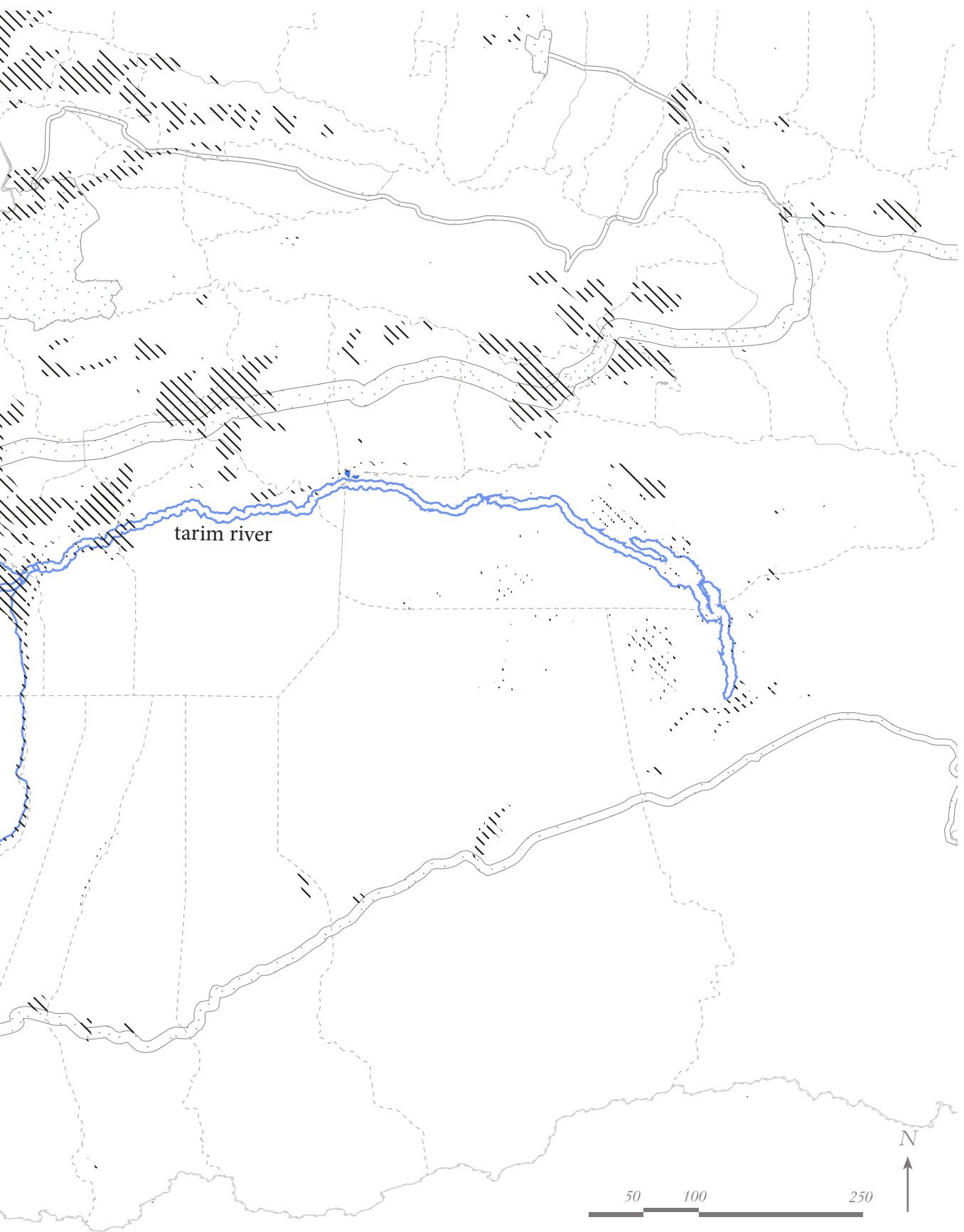
014-24.htm

Bingtuan,  
"Construction Corps" (XCCP)



Farmland & v

To appreciate full extent of bingtuan influence we first understand what waterways and farmlands are within their jurisdiction and Investigate where the cotton industries are located in relation to this. Thus revealing network. An entire process from farm to mill to factory under bingtuan control. A network of invisible cities, a Cottonopolis.







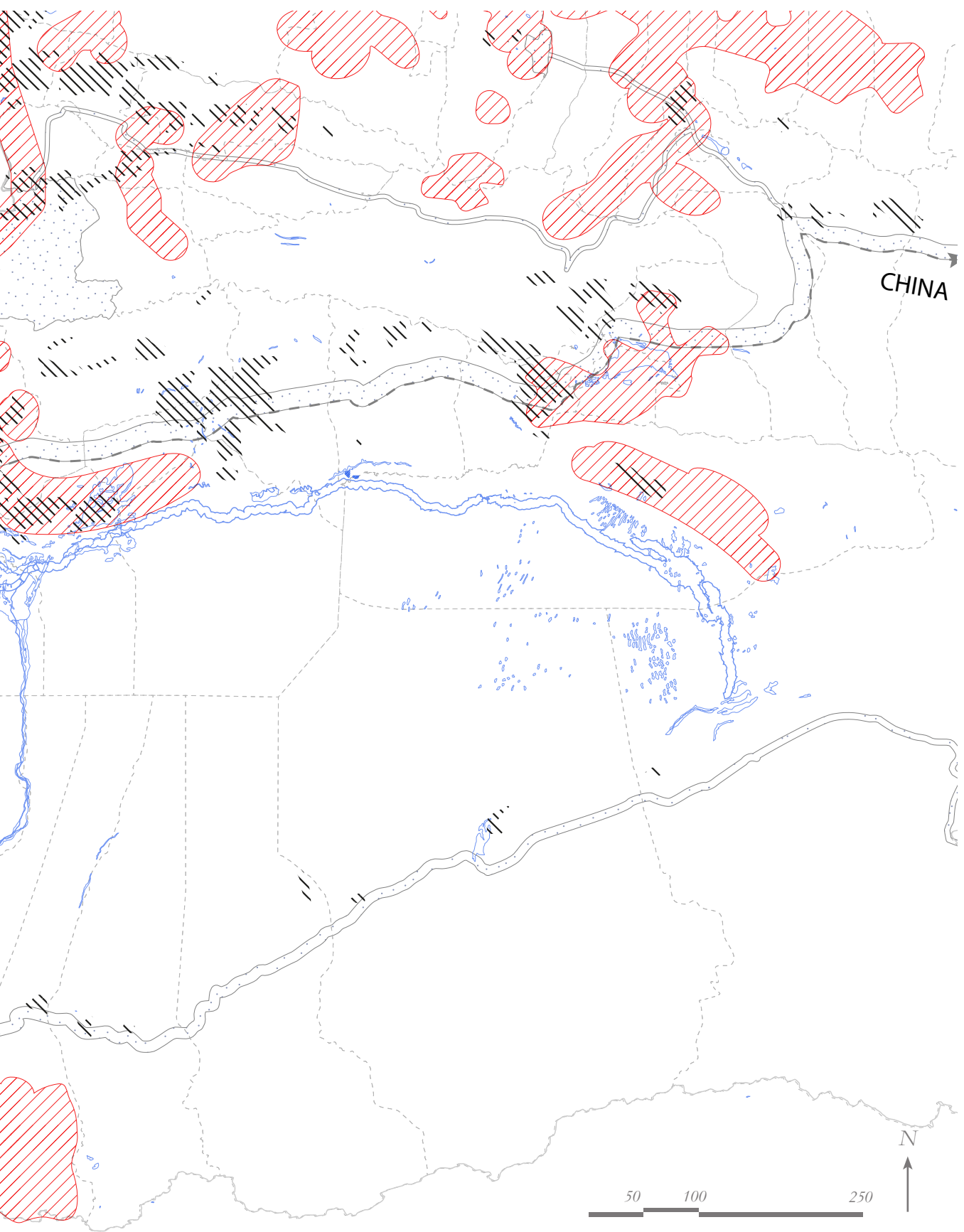
EUROPE



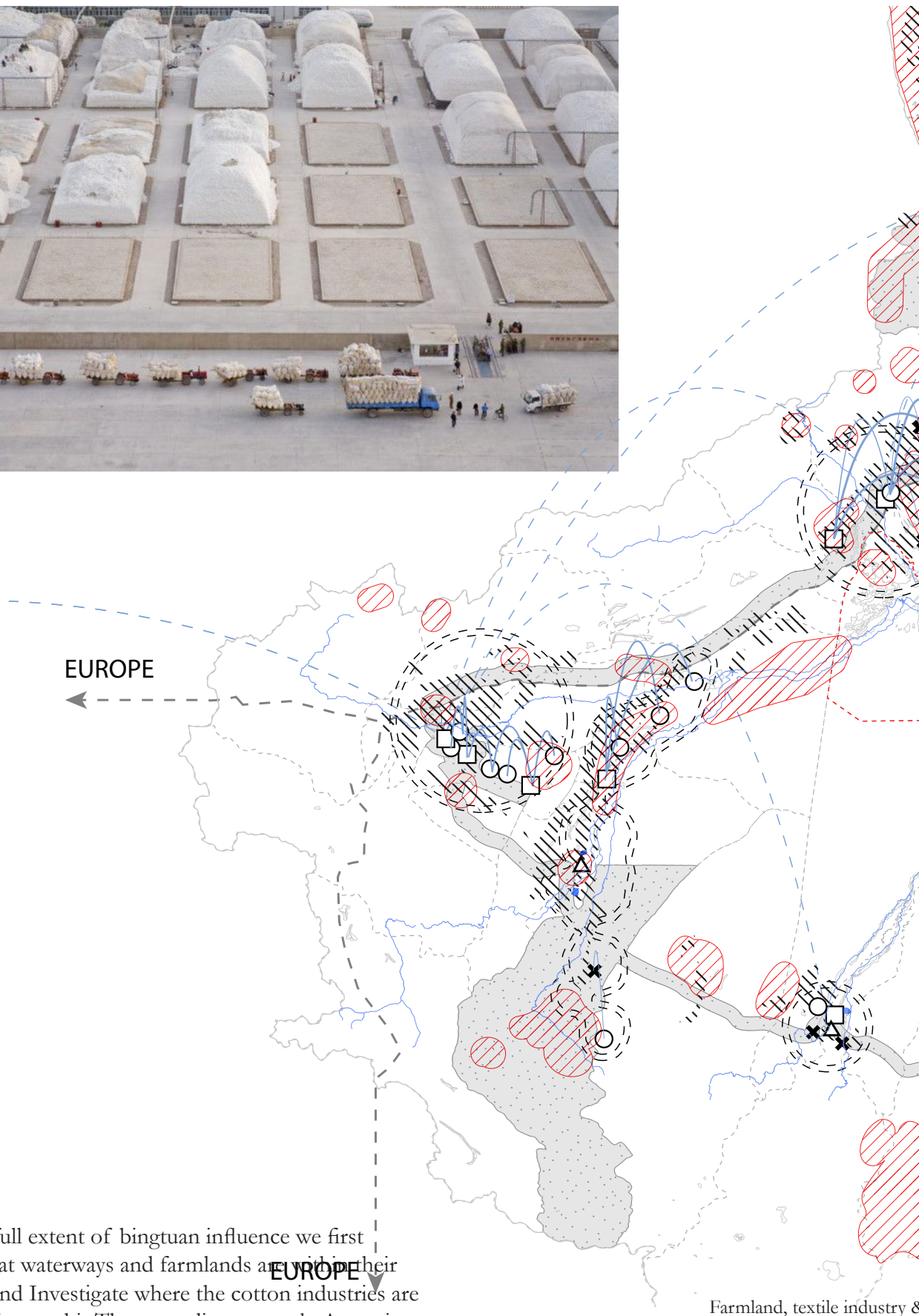
EUROPE

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farmland, logistic & Bir



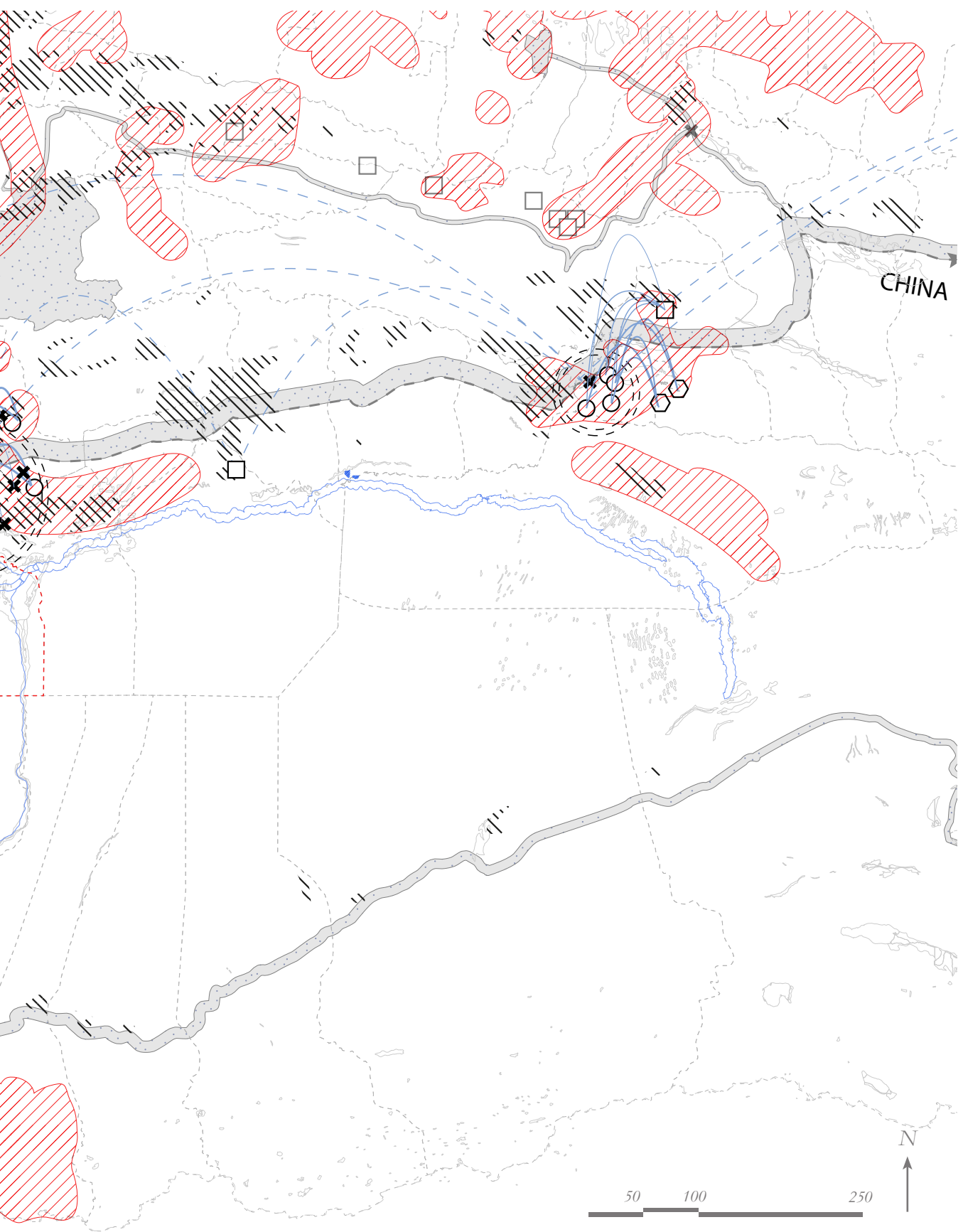
hydrocarbon control



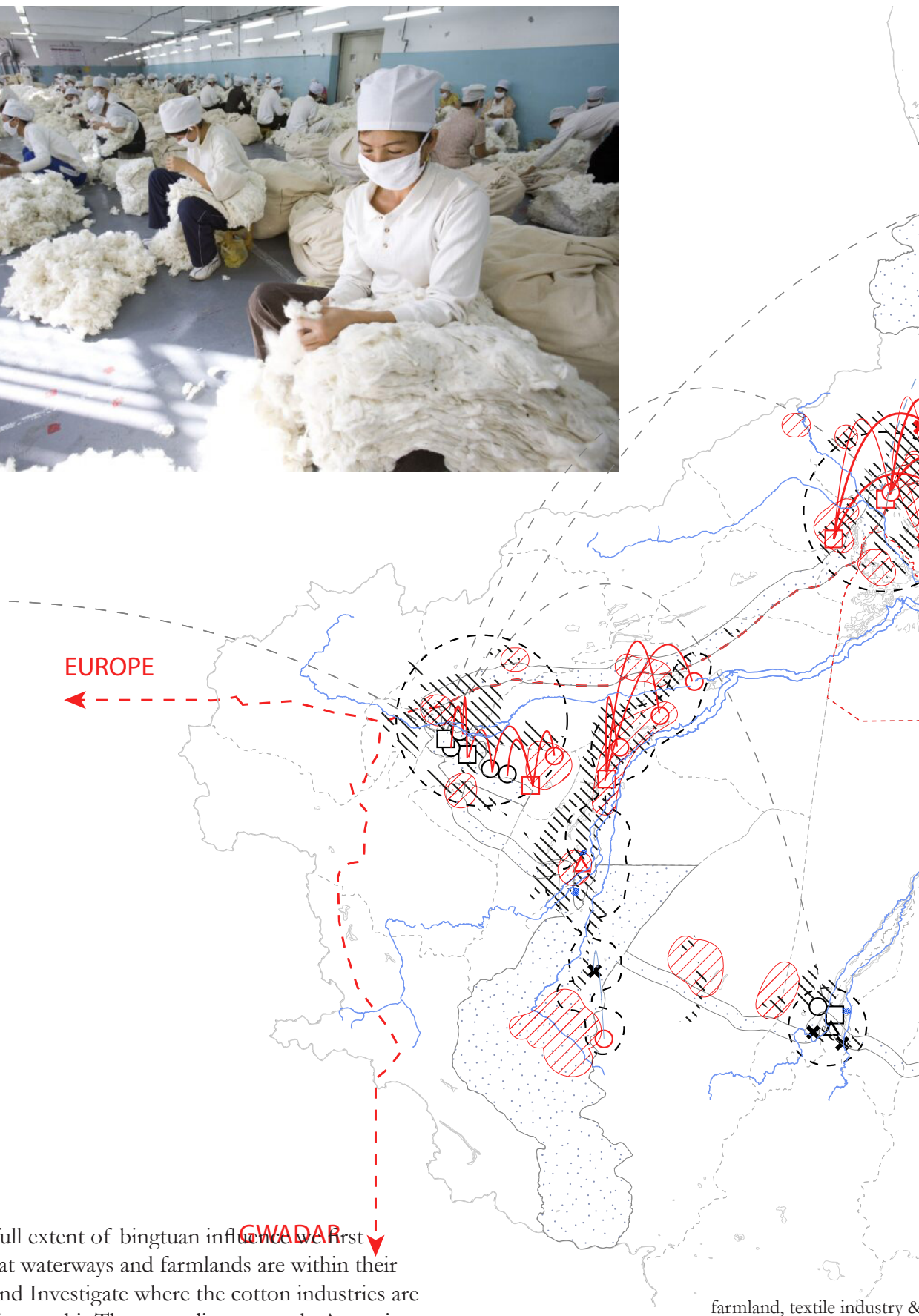
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Farmland, textile industry &



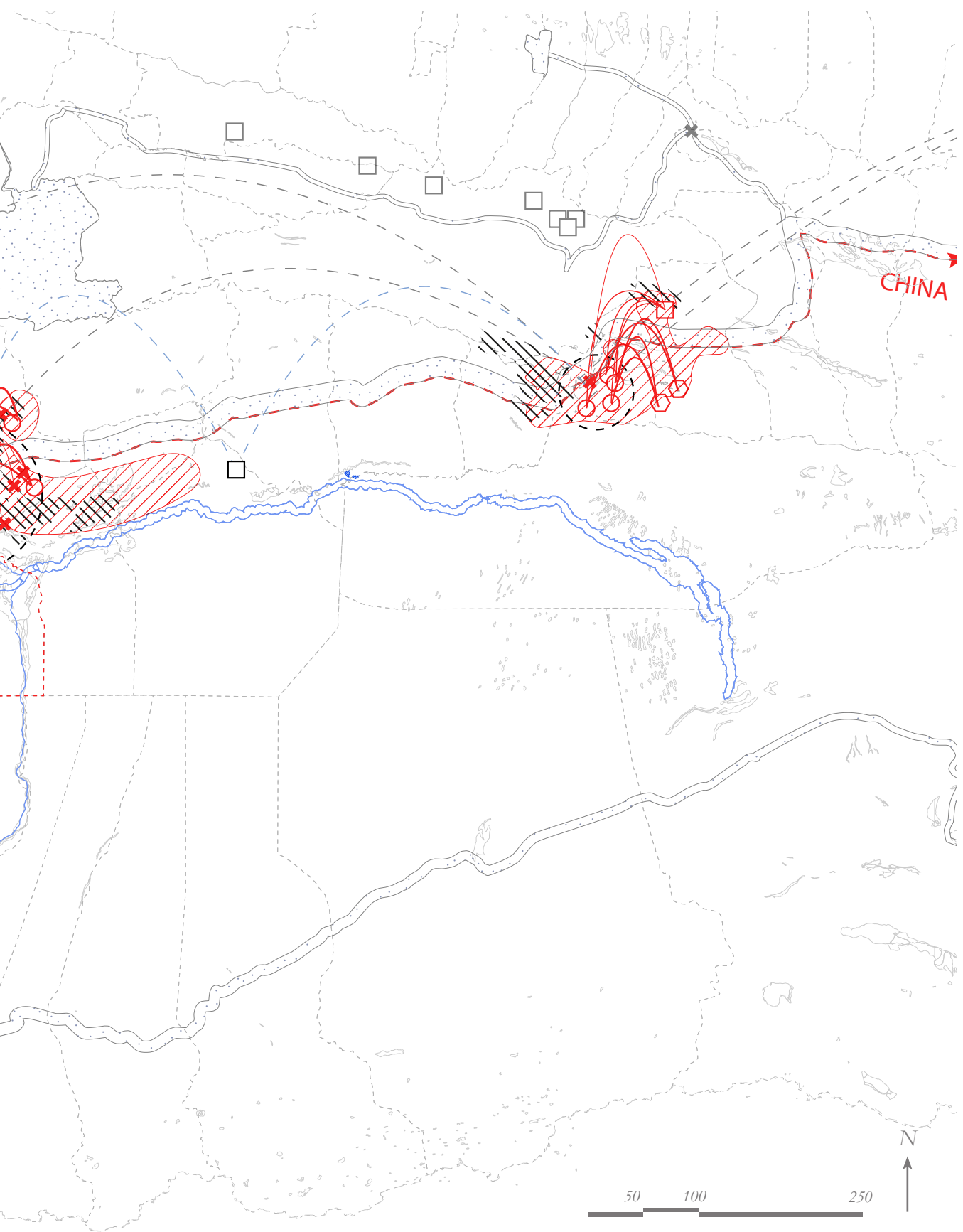


& bingtuan control

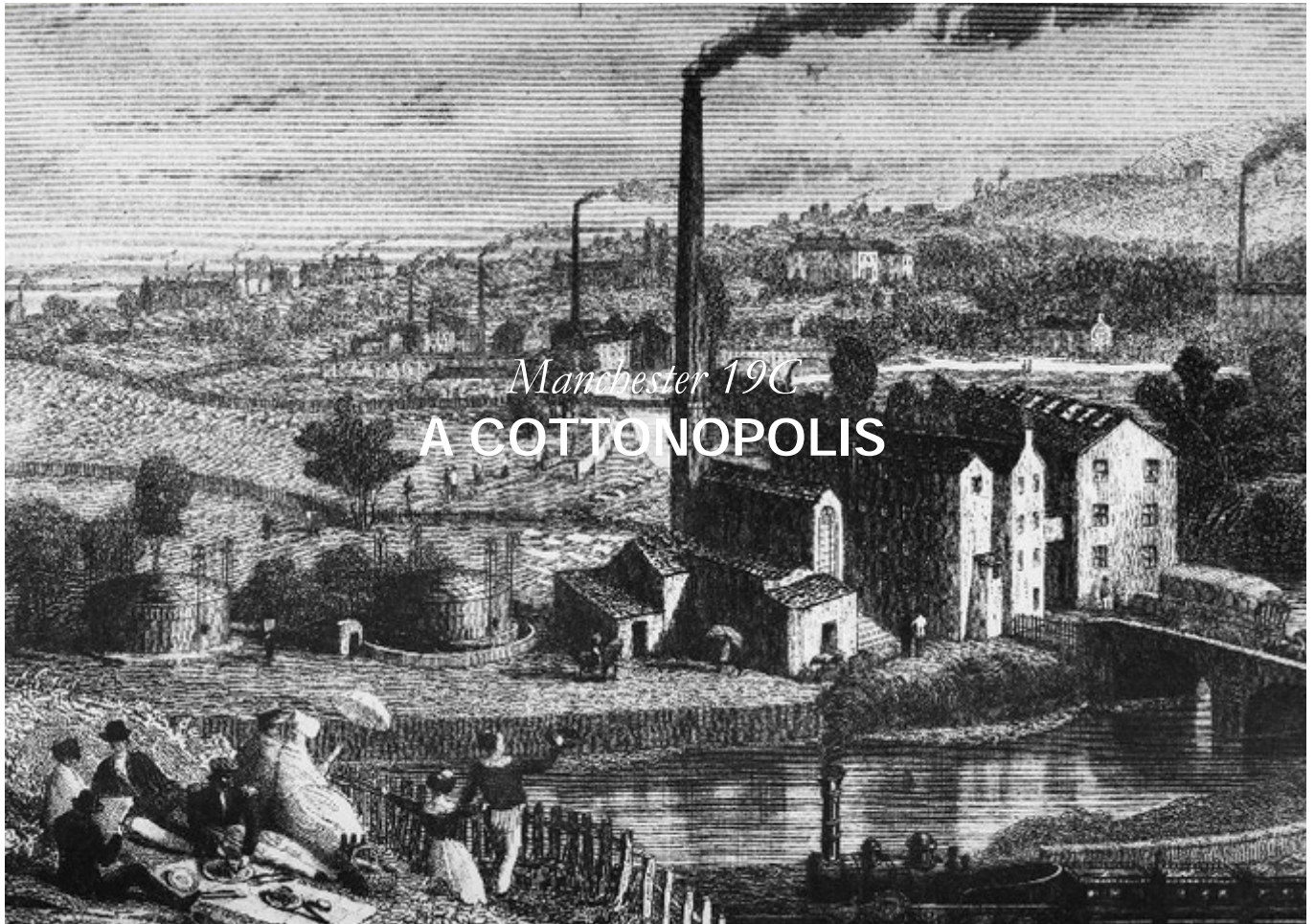


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farmland, textile industry &







Different to 'Manchester, Getting up the Steam', The Builder

The name alludes to the nickname given to the city of Manchester in 19thC when it produced 80% of the world's cotton. However, unlike its British counterpart, Xinjiang metropolis is not lauded or visible as I have shown by revealing it through this research. This lack of visibility, this blurriness sews doubt on the practices of the network.





This lack of visibility, this blurriness sews  
doubt on the practices of the network.





## 1.5 Sewing Doubt

Although the entire process of cotton production has been to some extent aided by modernisation and technology, it still demands a competitively cheap and large labour force. And it is this cheap labour which is the key denominator for a global monopoly.

Industrial Production &





"Industrial Production"

North



Although the entire pro  
production has been to  
modernisation and tech  
a competitively cheap a

Indeed whilst 83% of north bingtuan regions use  
mechanised harvesting, the south, which produces a far  
larger share of the cotton – remains heavily reliant on  
manual picking.

Automated vs. L





South

process of cotton  
to some extent aided by  
technology, it still demands  
and large labour force.

Human Machine





It is in my opinion that labour programs aimed to alleviate radicalism and poverty situated in a region characterised by judicial and civic oversight can easily facilitate coerced labour.

Programme to



Mural next to Mosque in Kashgar  
<https://www.bbc.com/news/world-asia-china-30722268>

Lifting out of poverty



It is this human element which is cause for concern with reports show the entire production line complicit, entangled and tainted with the claims of human rights abuse of the Uyghur inhabitants.

Programme to li





What does coerced labour look like ?

ft out of poverty

# Xinjiang cotton sparks concern over 'forced labour' claims

By Ana Nicolaci da Costa  
Business reporter

🕒 13 November 2019



Economic Policy

## Trump administration bans imports of cotton and tomatoes from China's Xinjiang region, citing forced labor

Move is the latest in a flurry of efforts to cut trade ties with China before Trump leaves office

**CNN** World Africa Americas Asia Australia **China** Europe India Middle East United Kingdom Edition ▼

## US bans cotton and tomato products from China's Xinjiang region over forced labor concerns

By [Rob Picheta](#), CNN

🕒 Updated 2209 GMT (0609 HKT) January 13, 2021

Global Reaction: A

In 2020 and the beginning of 2021 this claim was staked on the global stage: With both the US and UK placing trade sanctions on cotton from Xinjiang.

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Inequality

Global development

Xinjiang

Xinjiang: more than half a million forced to pick cotton, report suggests

Forced labour much more widespread than initially thought in China region that supplies a fifth of the world's cotton

Helen Davidson in Taipei

BIG STORY 10 DECEMBER 15, 2020 / 6:21 PM / UPDATED A MONTH AGO

## China accused of forcing 570,000 people to pick cotton in Xinjiang

Press release

# UK Government announces business measures over Xinjiang human rights abuses

market under threat



[REDACTED]

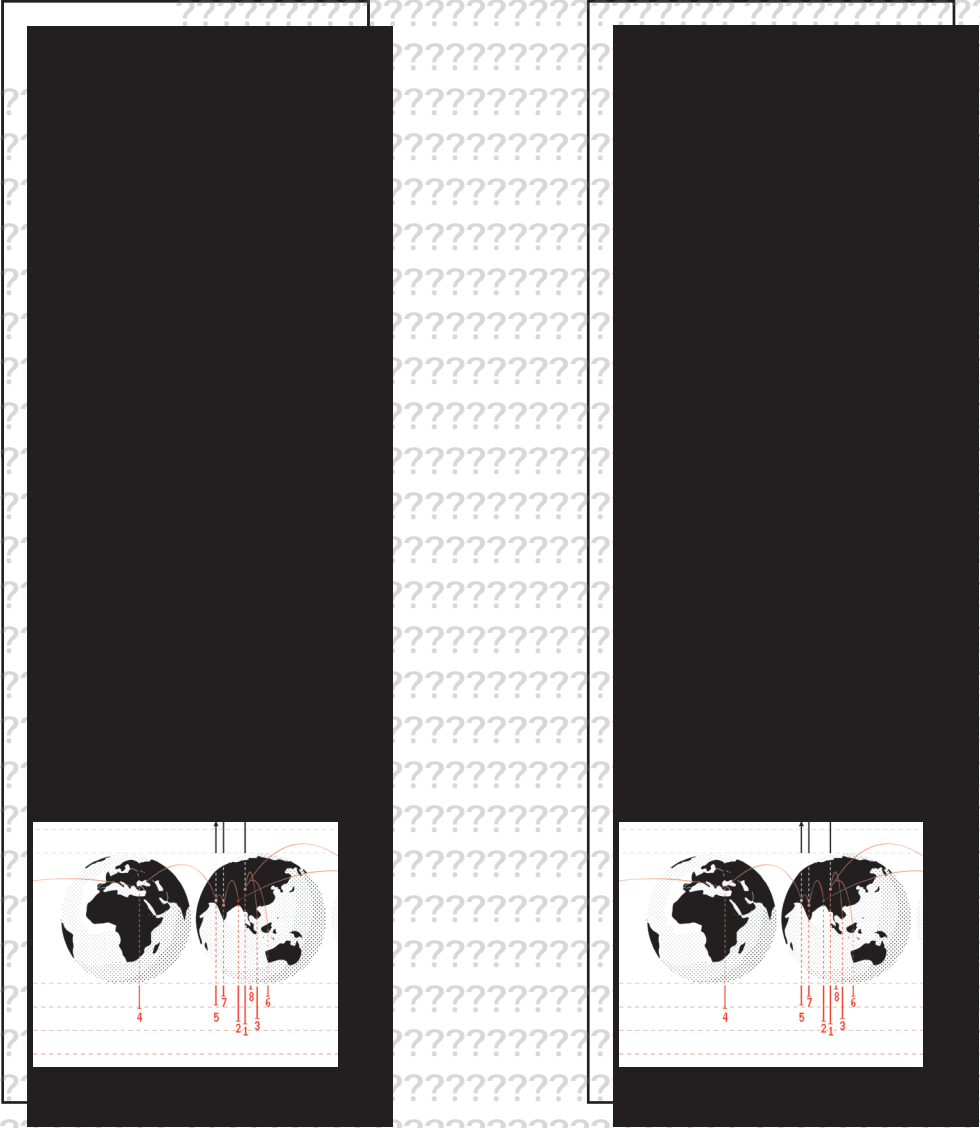
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WEAVED IN CHINA  
DYED IN CHINA

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Q: What does it take to make these

??  
??  
??  
??  
??  
??  
??



# Drawing Water, Weaving

*Can a hypothetical proposal for a  
of operation meet global enviro*

But what would it take to make these invisible lines of production visible? More specifically, what does it take to make these invisible cities visible.

How can we reveal the cottonopolis at the heart of Xinjiang and its negative production externalities: both environmental and social

So my project will be a hypothetical proposal for an alternative to the current modes of operation in a bid to meet global environmental and ethical standards. It will imagine a solution to this by creating a visible city which can Draw Water, Weave Power and Sew Doubt.



2.

ject:

g Power, Sewing Doubt

*n alternative to the current modes**nmental and ethical standards?*



## Option 1

**Do nothing**

Water runs out

Cotton chain moved

Cotton industry dissolves

Bingtuan bailed out

Destabilised region



## Option 2

**React to s**

Cotton pri

Water r

Indust

Bingtuan

Destabilis

For China to maintain its global monopoly it must change its course of action.1. Detach from Tarim River and produce its own autonomous water source2.Imagine a new practice of labour fit for modernity3.Be a visible entity which is embodied through architecture

An O



## Option 2

sanctions  
ce increase  
uns out  
ry fails  
bailed out  
ed region

## Option 3

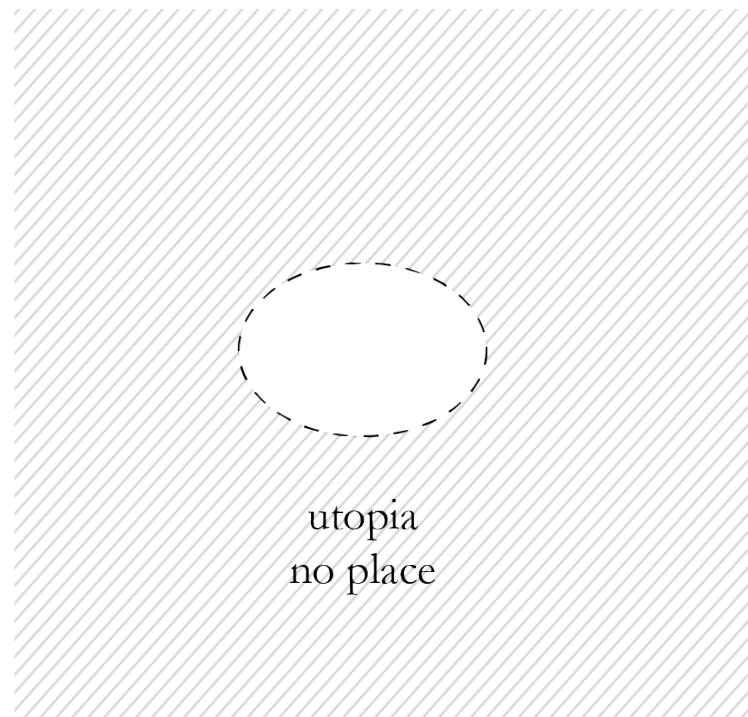
Change course  
Autonomous water production  
Modernisation of labour  
Visible through architecture





image

mir



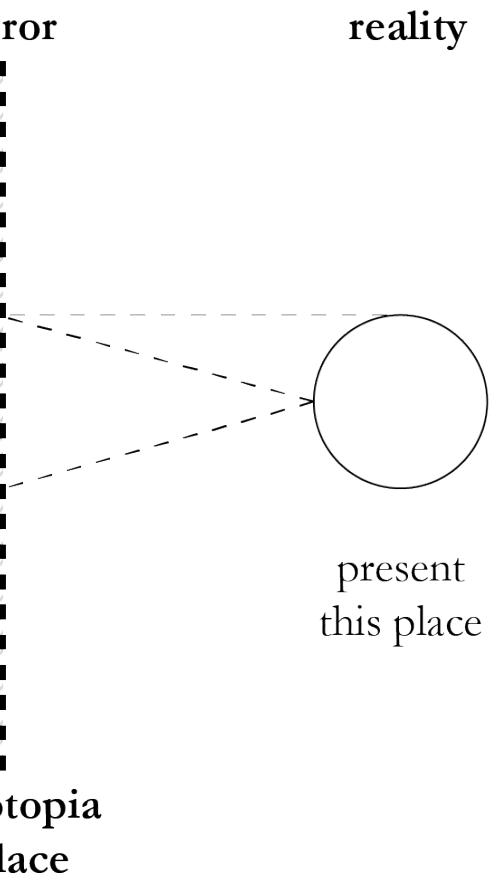
utopia  
no place

hetro  
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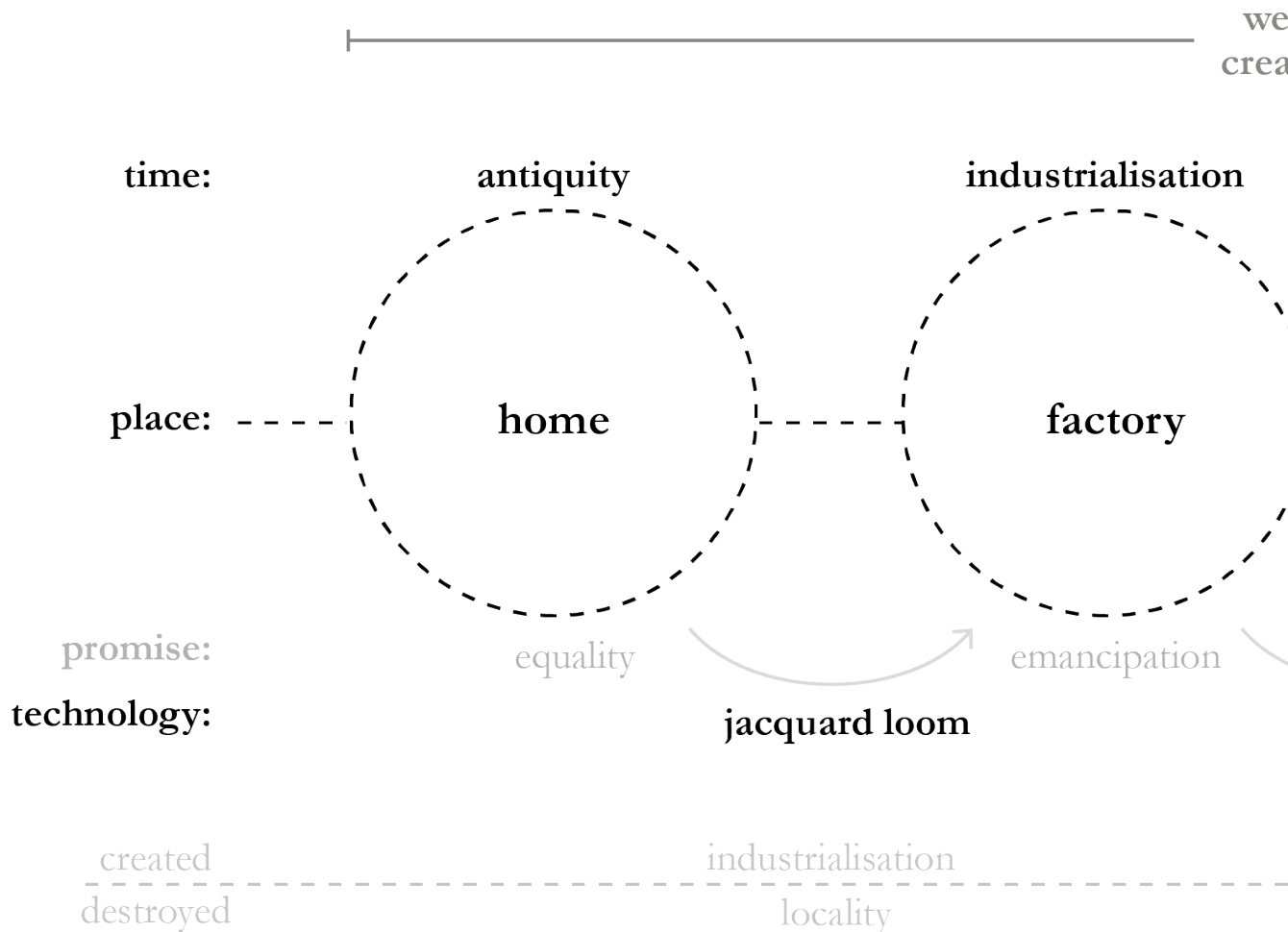
The mirror as a heterotopia: “it makes this place that I occupy at the moment of looking at the image, a place that is at once related with all the space that surrounds it, and absolutely unreal, since in order to be perceived it has to filter out all other spaces and all the other

The project uses Foucault’s concept of a mirror as a heterotopia to position itself. Thinking of the project as a mirror, a thing which occupies a real place, but shows only a reflection of a placeless place, the image of a utopia. This reflection allows us the viewer to pause, observe and comment on the image in front of us, which is to some extent a reflection of ourselves.

Michel Foucault’s ‘



moment when I look at myself in the glass at once absolutely real, connected to be perceived it has to pass through this virtual point which is over there.”

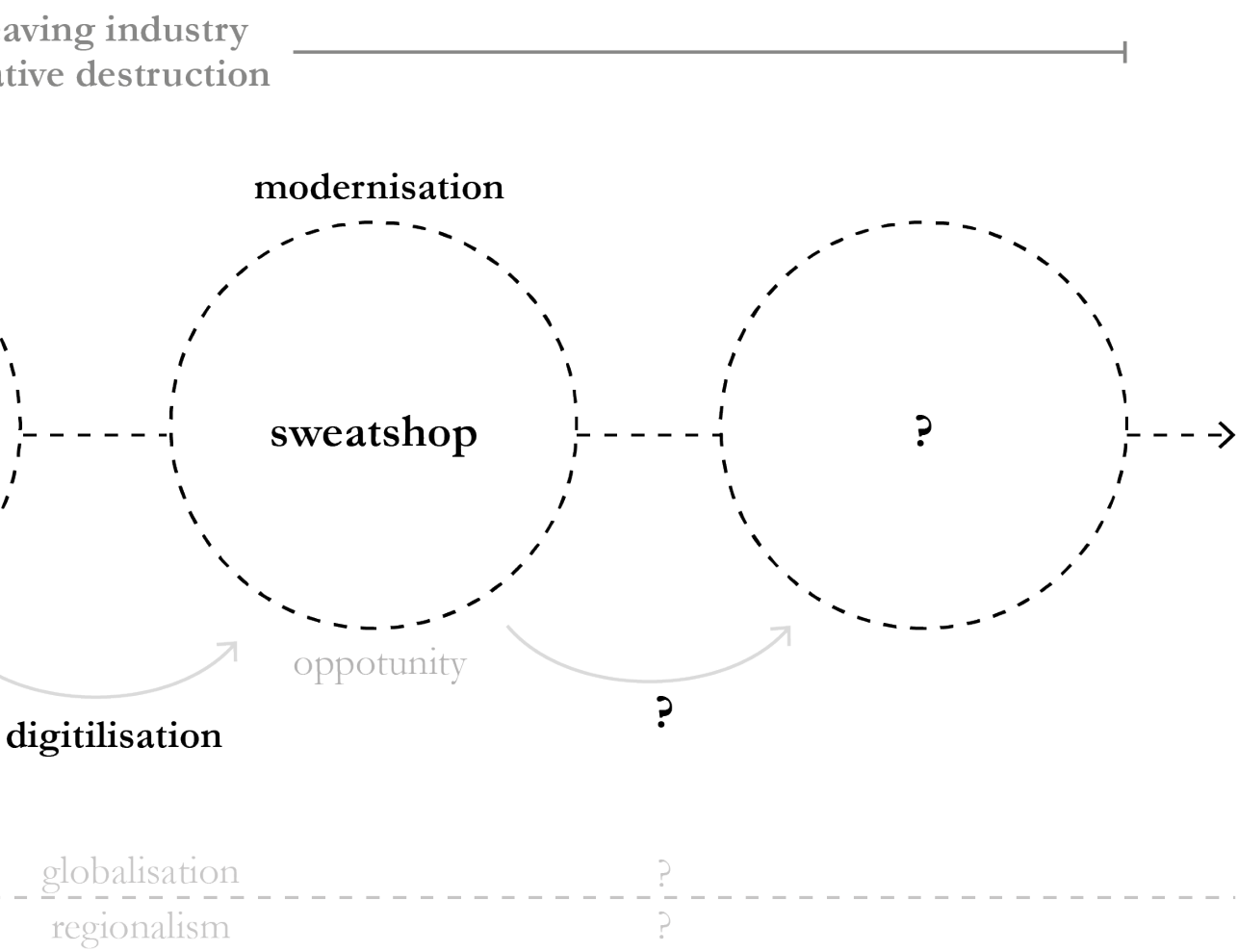


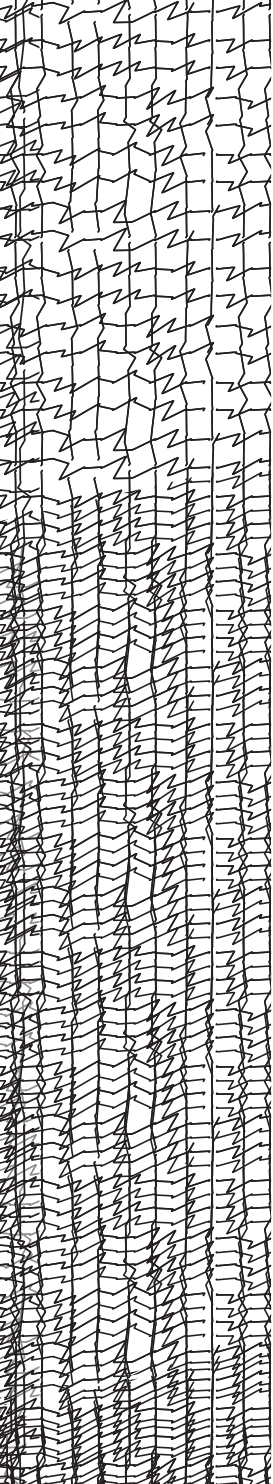
Indeed, the place in which the weaving industry operates has moved with us from antiquity to industrialisation to modernity, made its way from the home to the factory to the sweatshop. The notion of heterotopias exists in weaving history. The 19thc Factories were heterotopias of deviation: a place of highly disciplined order, where relationships between members of society are organizationally restructured to facilitate the emergence of a new order that may transform society.

But for all the advancements in technology, the promises of each industrial revolution to bring equality, emancipation and opportunity to the corpus who laboured for it, was never realised.

A Utopic Image: the need

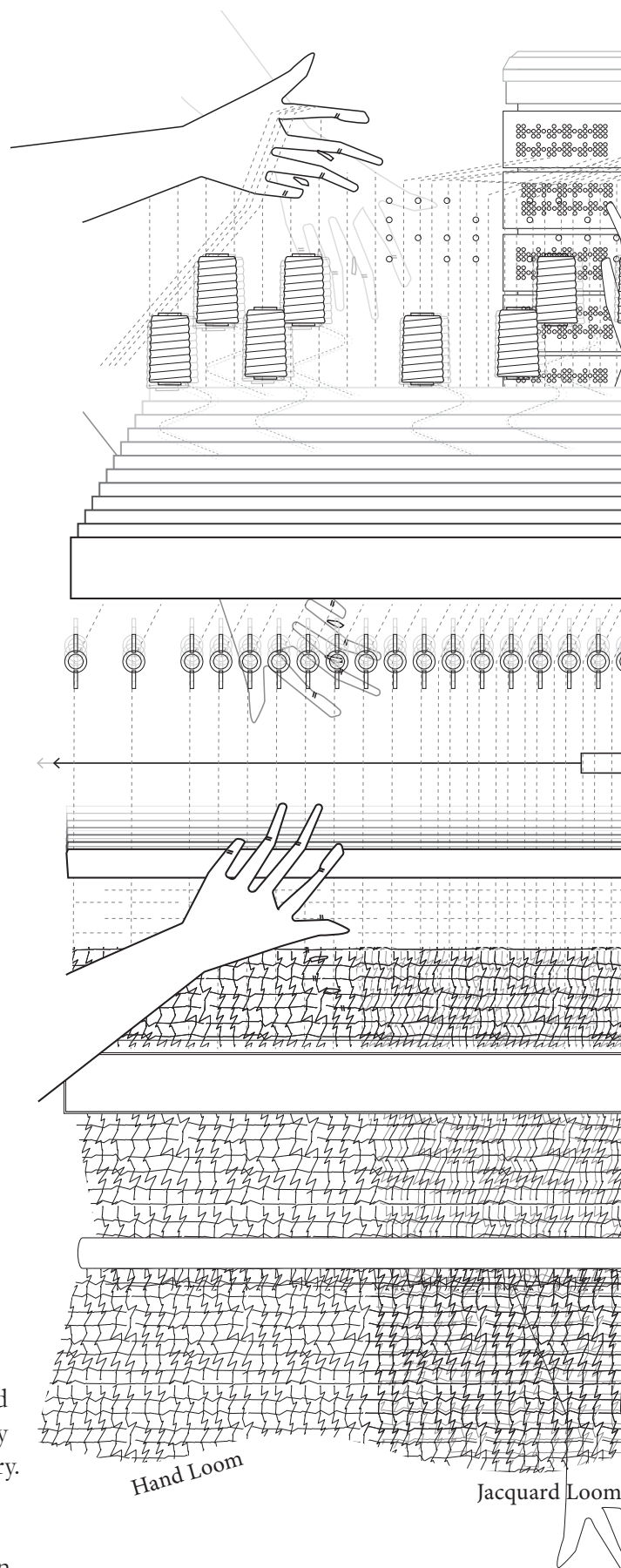




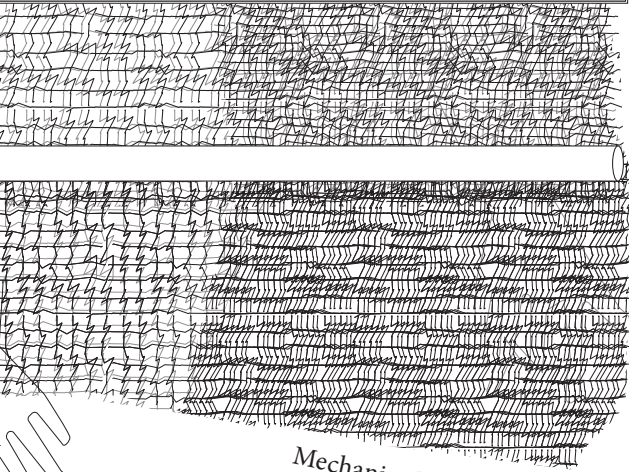
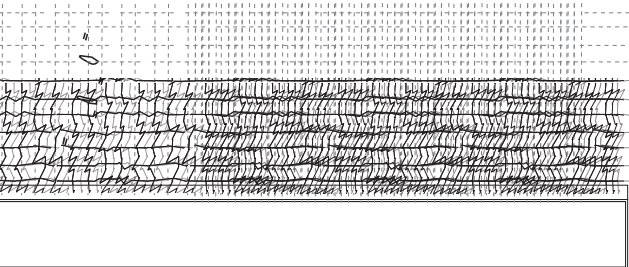
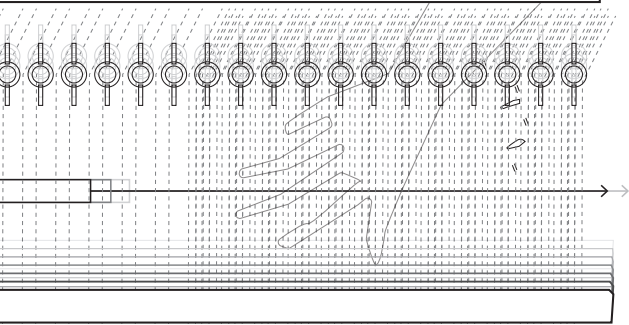
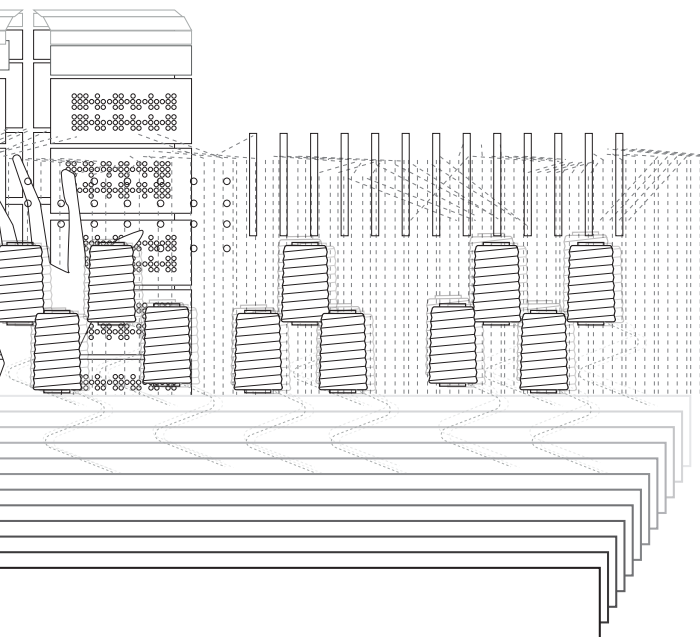


Thus the hope is to use this heterotopia to tell a fable, by imagining anew, to reveal the myth modernity and the broken promise of social equality.

The weaving loom symbolises this process: the artefact of time. Each technological improvement from the introduction of the jacquard loom to computerisation and digitalisation has served to increase the speed and quantity of production. Through this drawing, I try to tell this story. Over time, products are being made faster, the material is being woven tighter and products are being made in larger quantities. Despite technological advances, shown in the change from the hand to the jacquard to the machine, there is still a human hand behind this process albeit more obscured and invisible than it was ever before.

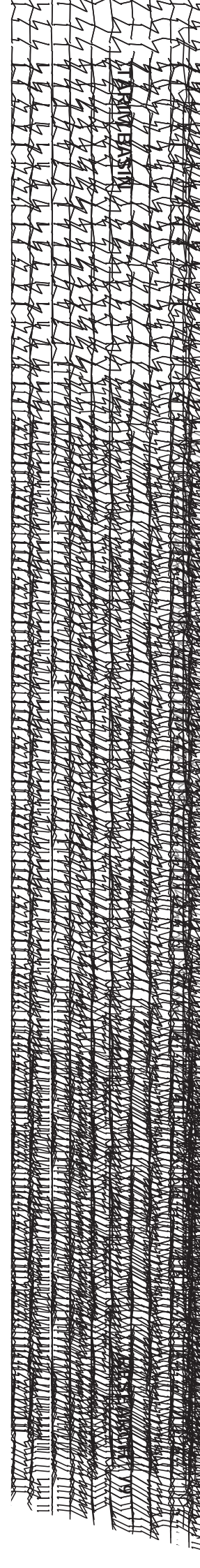


The Artefact: failed promises of



Mechanised Loom

of the 4th Industrial Revolution





But where to place this site?

There are 4 main strategic areas of cotton production around the Tarim Basin, as I have shown before in this map analysing the hidden cottonopolises. Each area's radius has access to the river, located near to the infrastructure of the Belt Road Initiative and hosts cotton croplands alongside textile factories. Most importantly they are within bingtuan territory which is the point of international contention and need for intervention. Each of these areas host a bingtuan city at its periphery. Hence 4 Cities: 4 possible sites of intervention.

## 2.1

### *Project: The Site(s)*

#### *water, infrastructure, labour*

##### A. Tumxuk City

1st Division : Aksu Prefecture : 1953

1. Access to River
2. XPPC Territory

##### B. Alar city

1st Division : Kashgar Prefecture : 1997

1. Access to River
2. Access to BRI
3. XPPC Territory

##### C. Hotan city

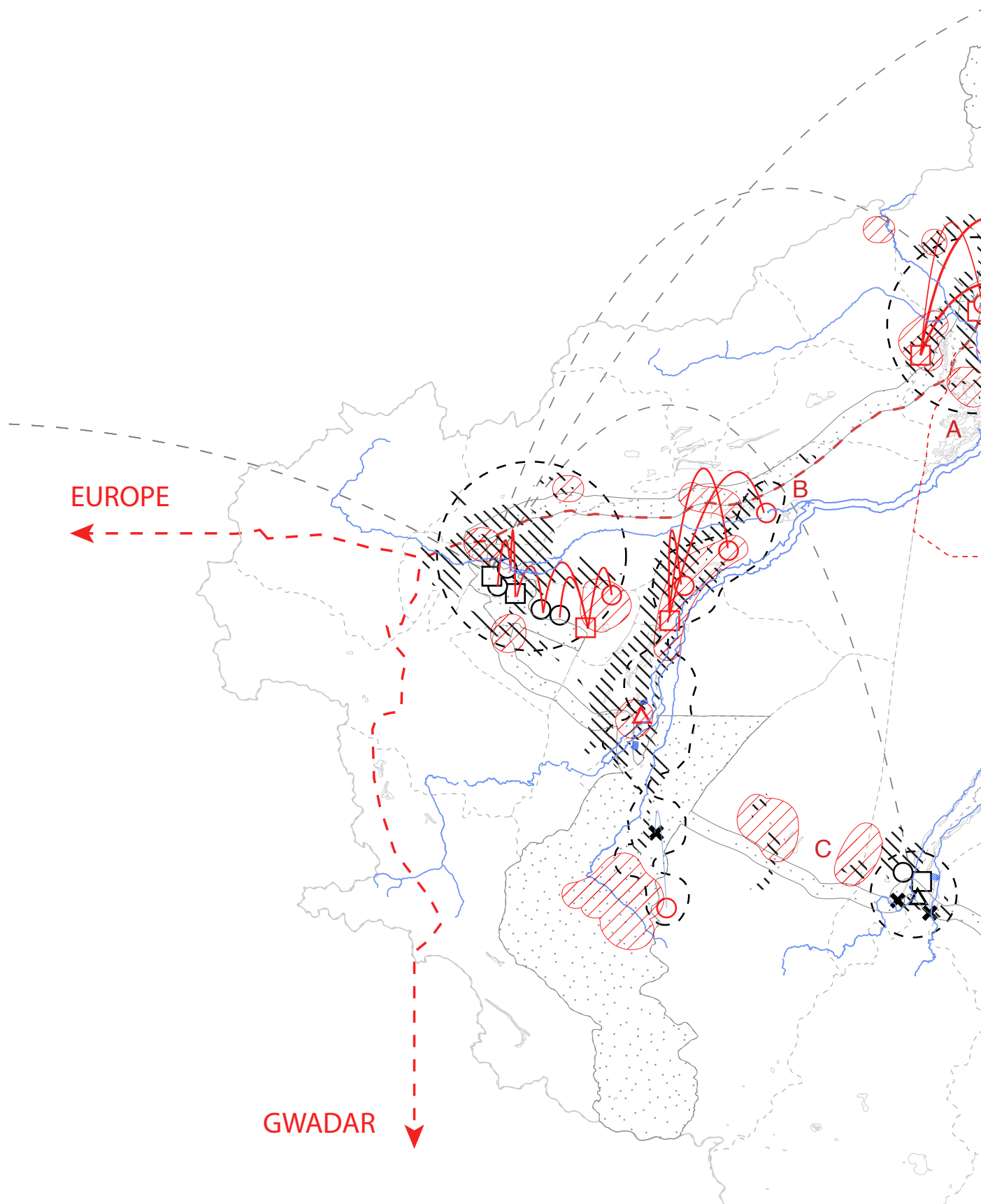
1st Division : Aksu Prefecture : 1953

1. Access to River
2. XPPC Territory

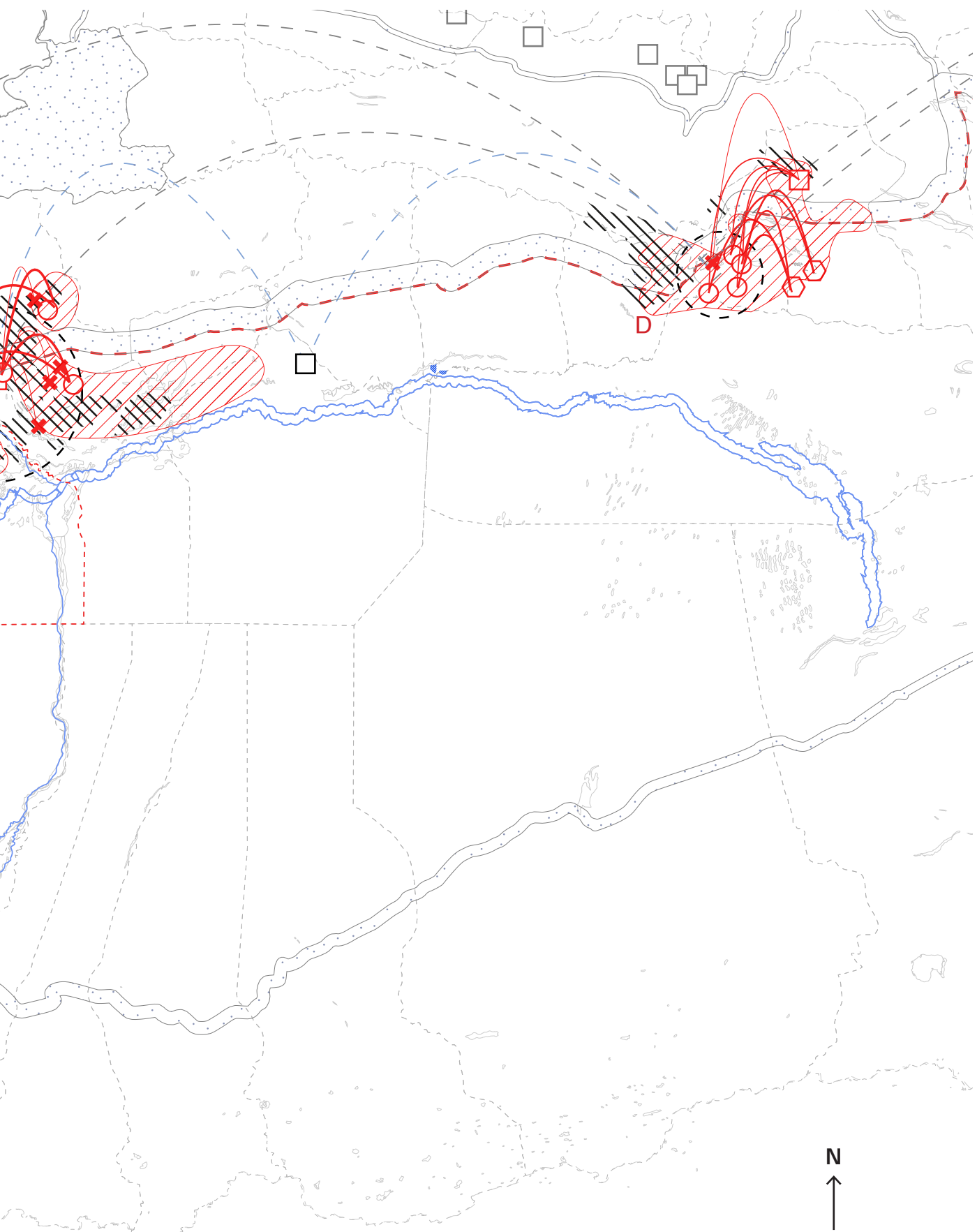
##### D. Tiemenguan City

1st Division : Korla 2012

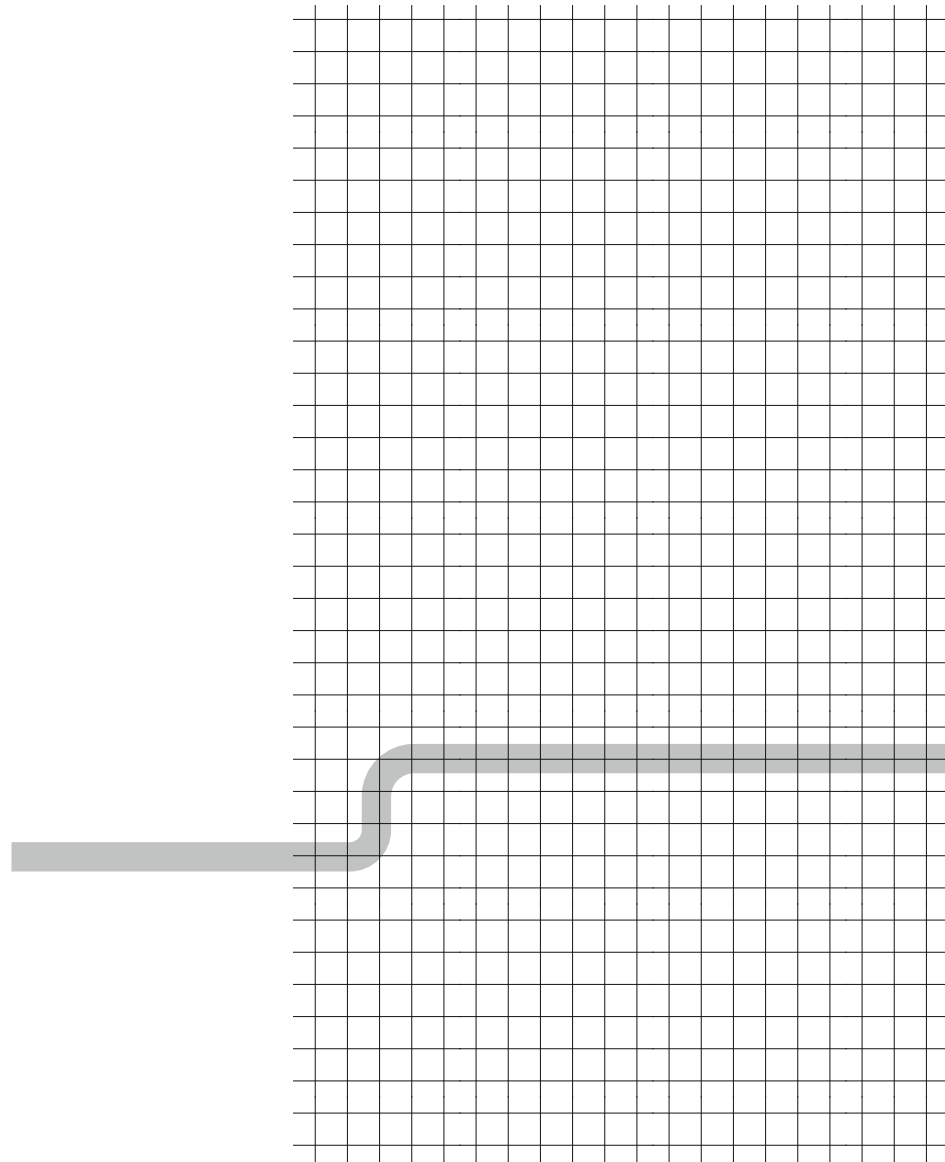
1. Access to River
2. Access to BRI
3. XPPC Territory
4. Near Fields





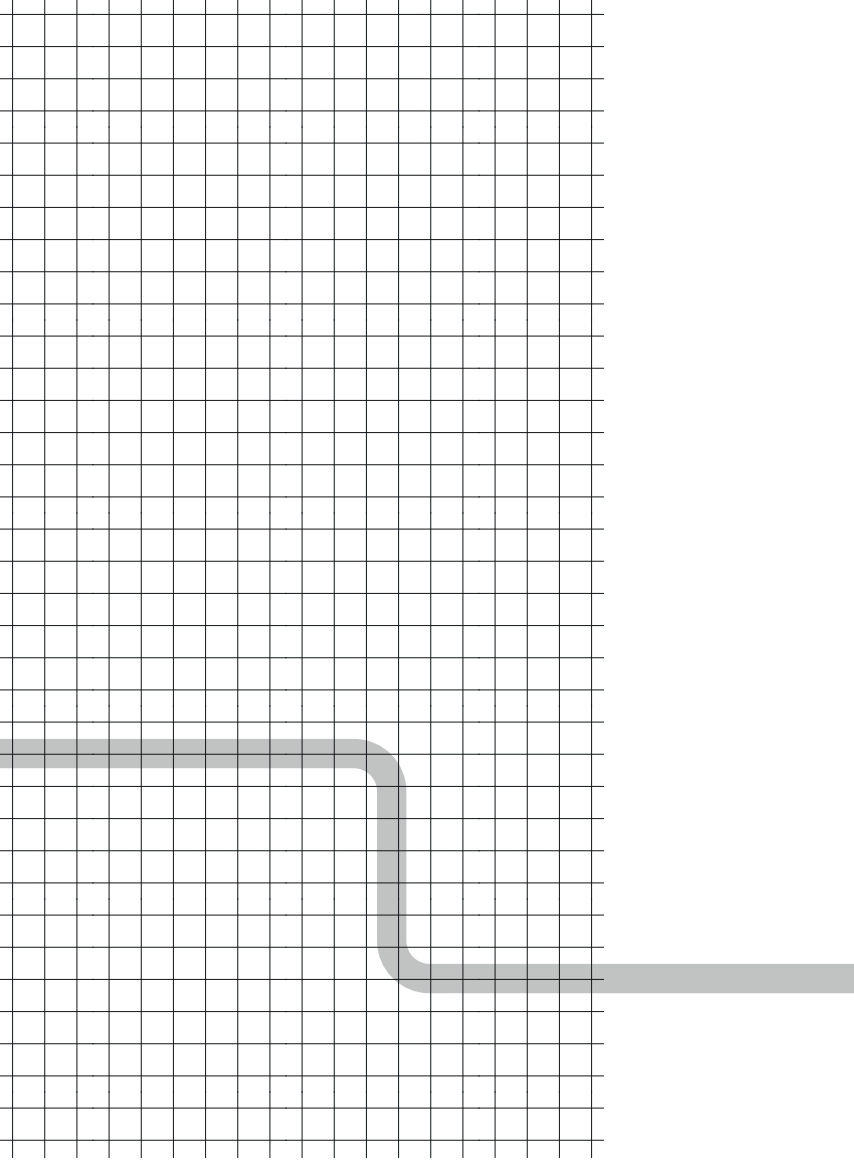


site of intervention

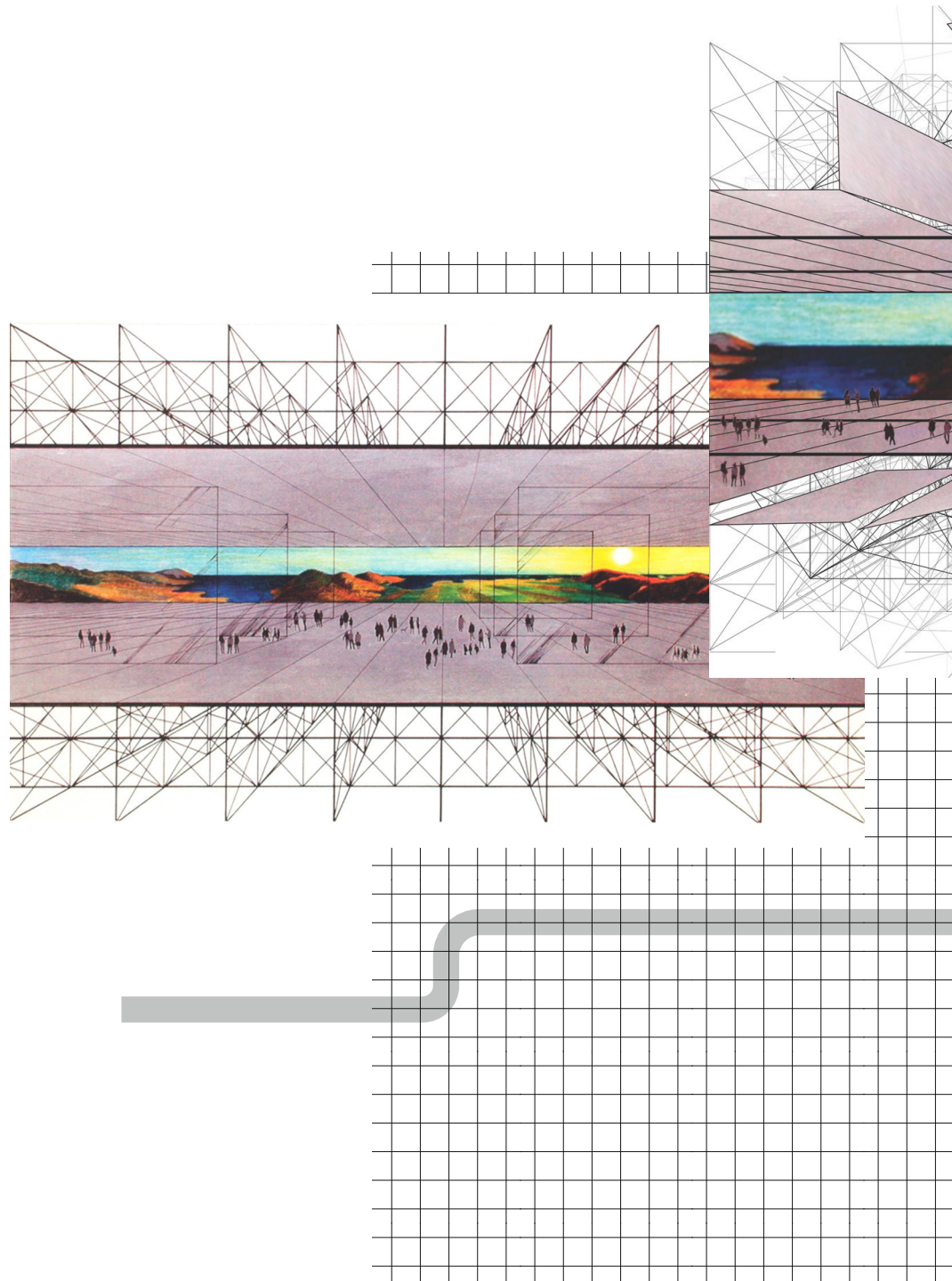


For now I choose not to cement a site until the design and the programme have been developed to understand where it be best to test first.

Site Ma

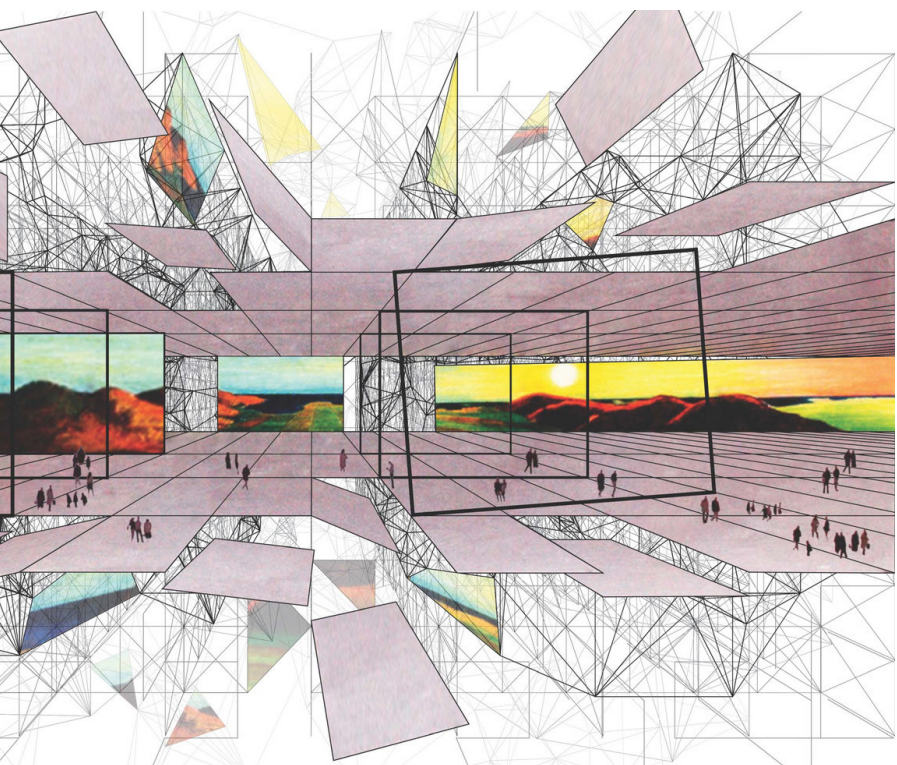




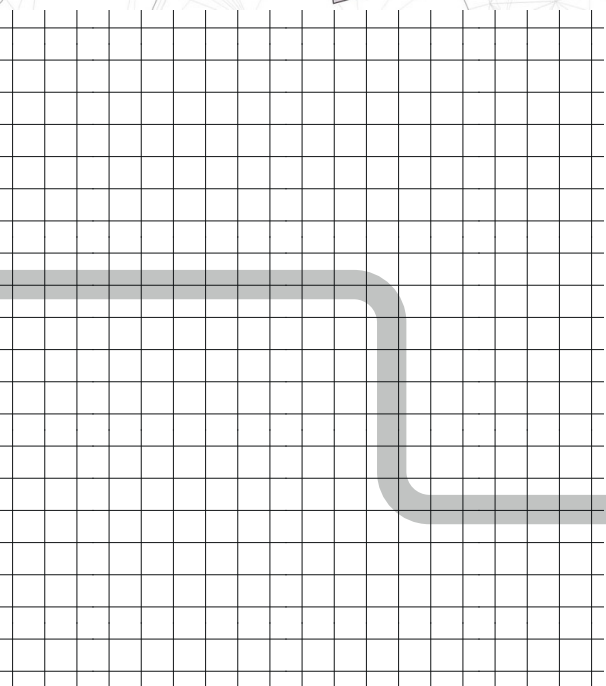


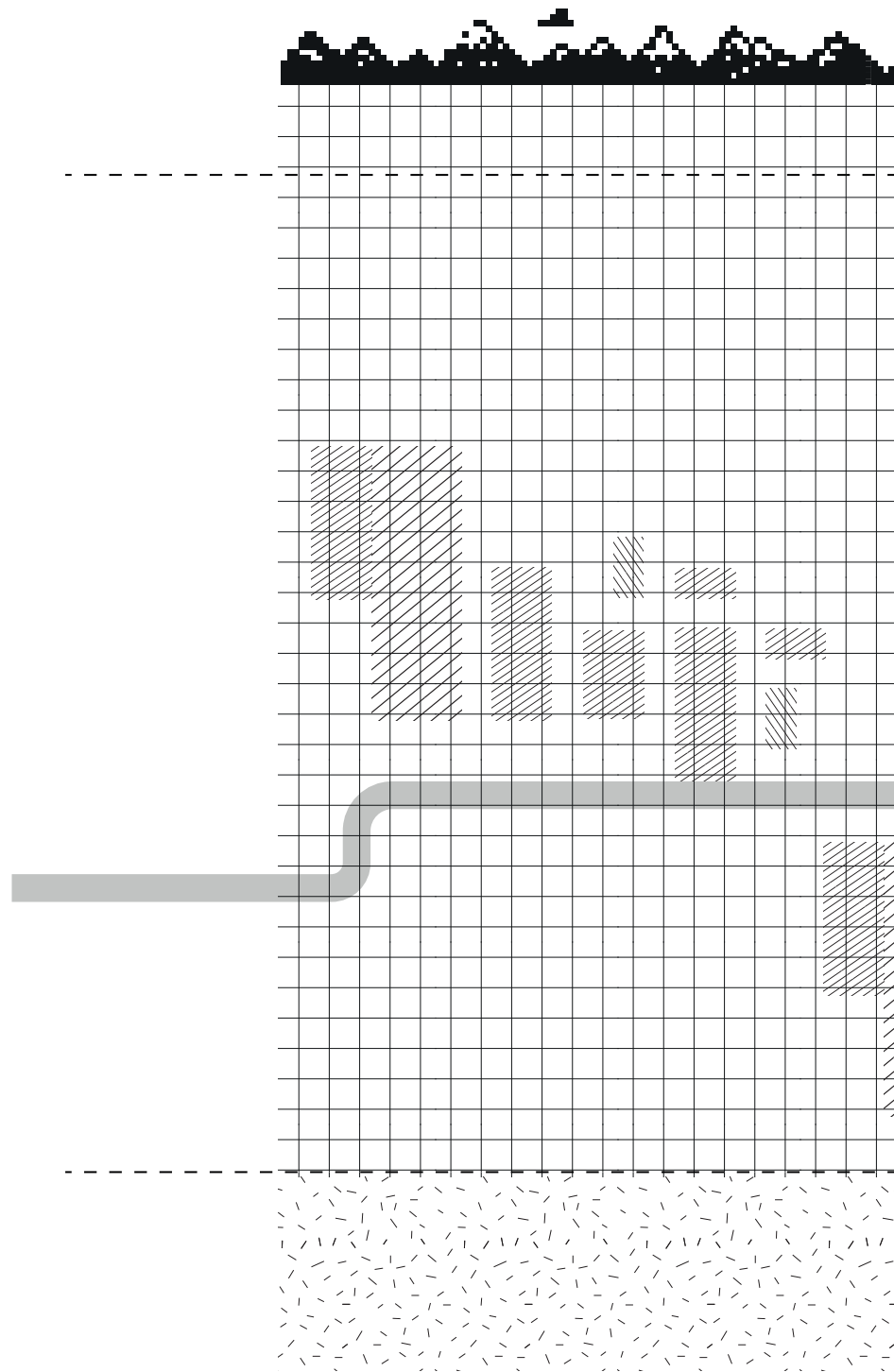
This concept of placelessness relates to ArchZoom's Non Stop City, which envisioned an urbanism of continuous mobility, fluidity and flux. Letting the proposal be an exploration of a kind of "degree zero" urbanization: aka an urbanism without qualities.

Non Stop City



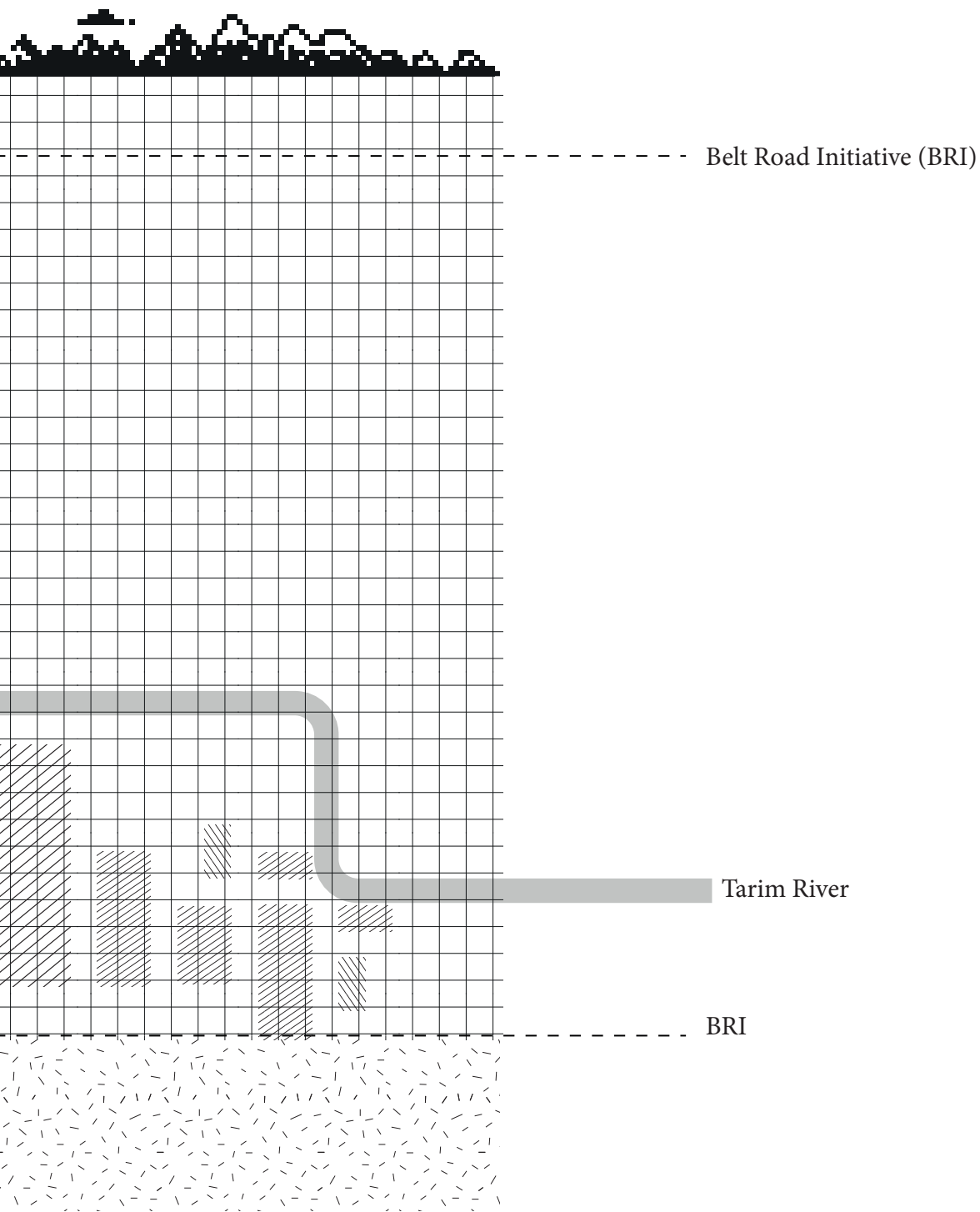
*Non Stop City ArchiZoom*



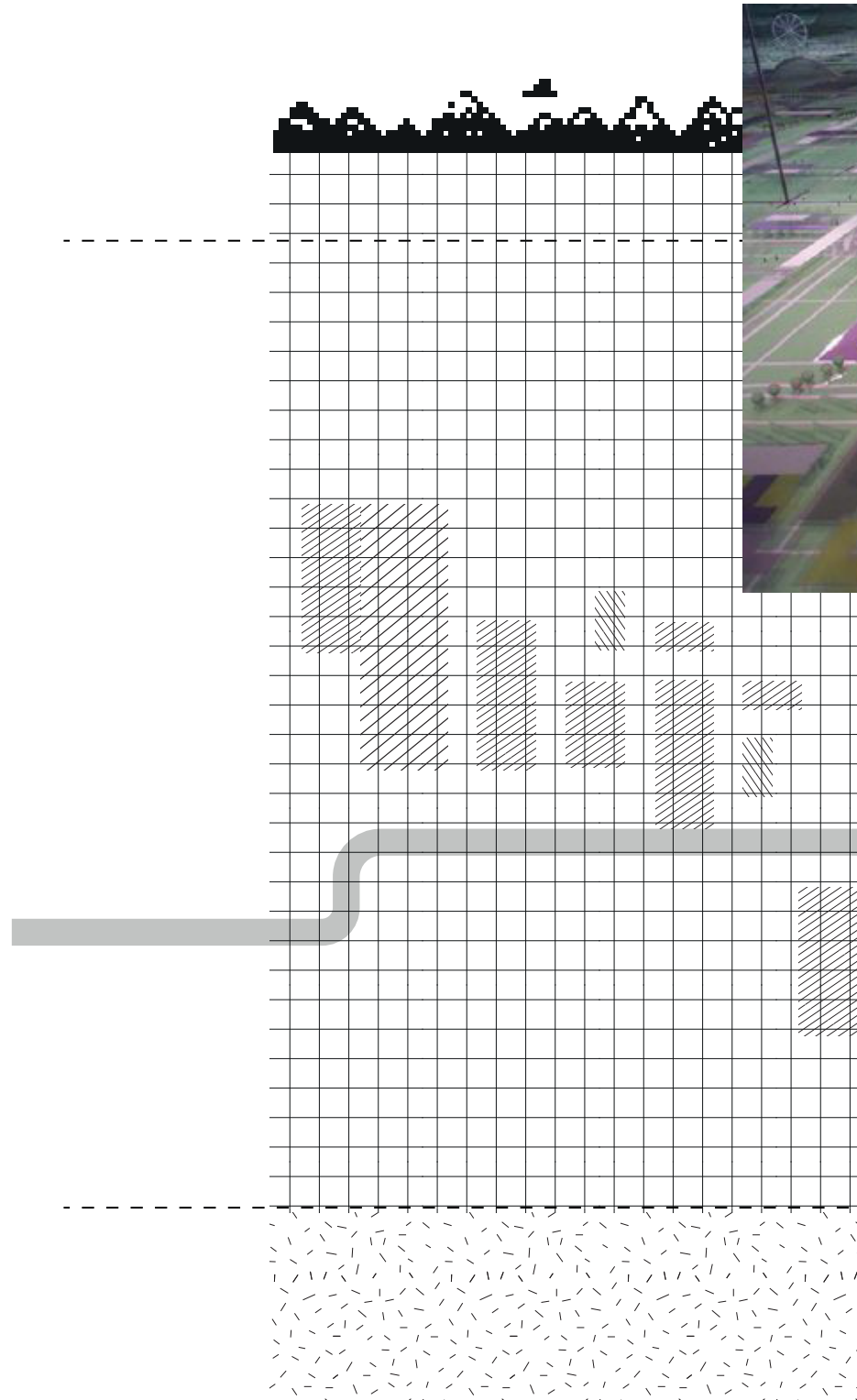


However, my proposal is situated in some boundaries of reality: a landscape bookend by mountains and desert, intersected by a river and infrastructure.

Current geog

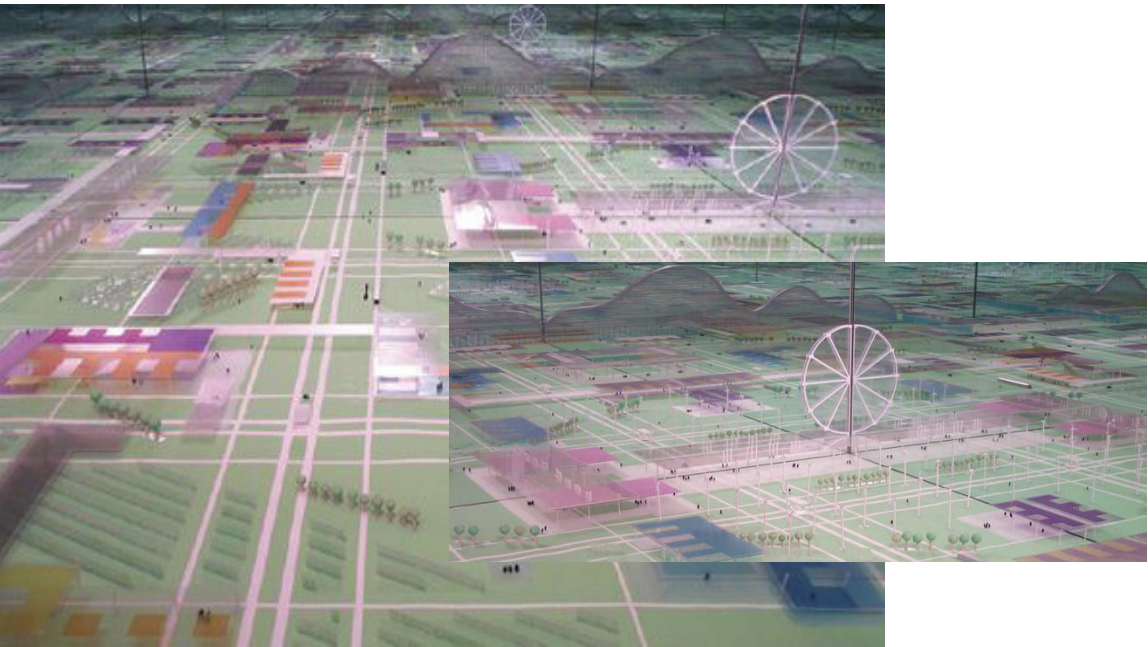




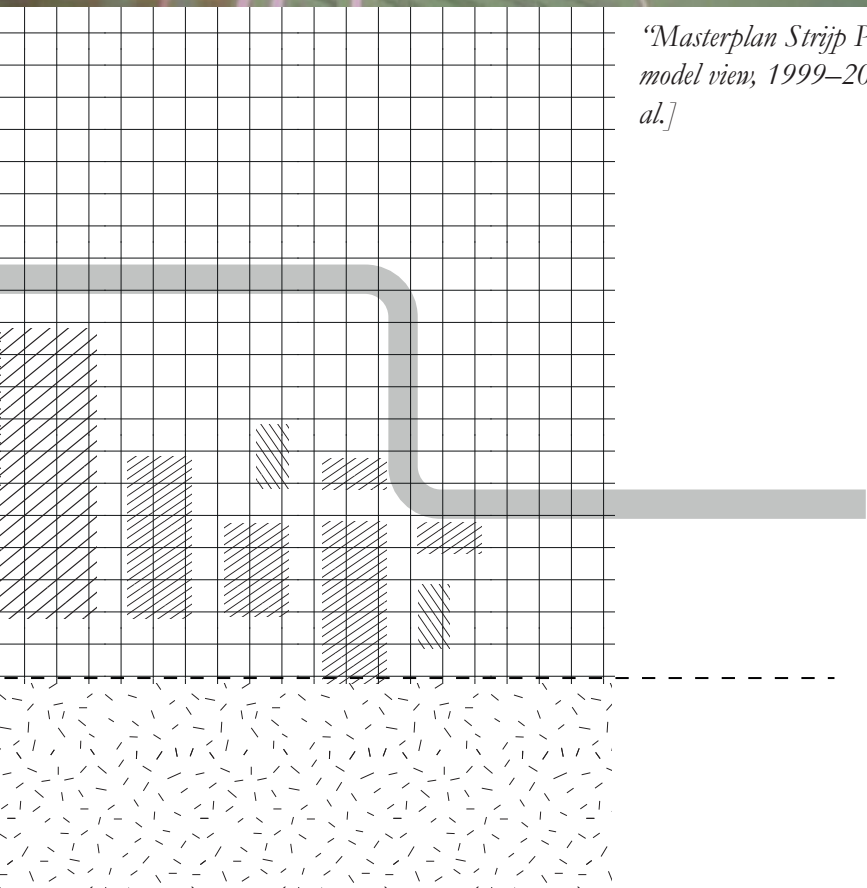


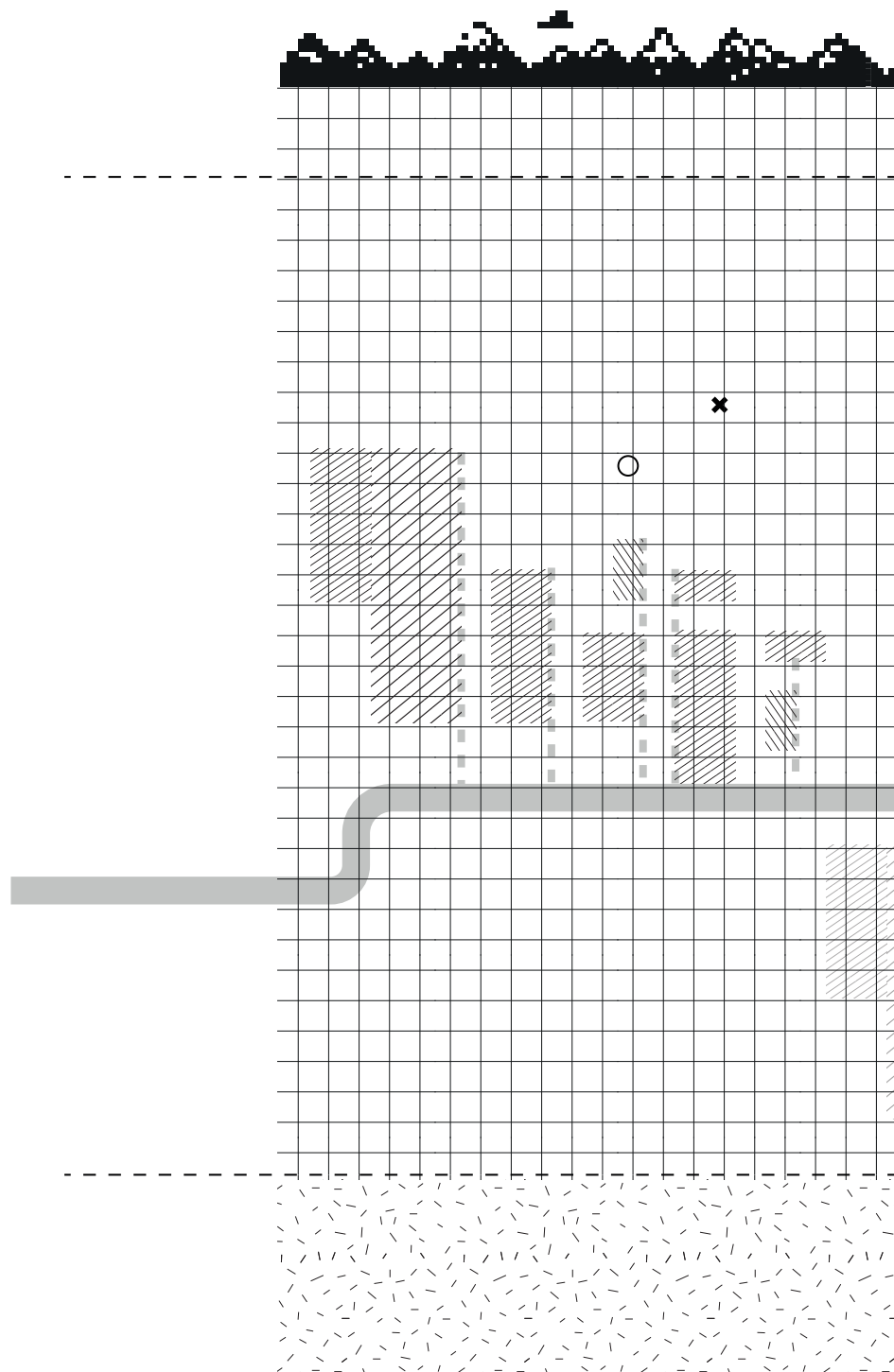
This consideration of the regional landscape echos Ludwig Hilberseimer's proposal for New Regional Pattern, a strategy for low-density urbanization based on regional highways and natural environmental conditions.

Hilberseimer's concept



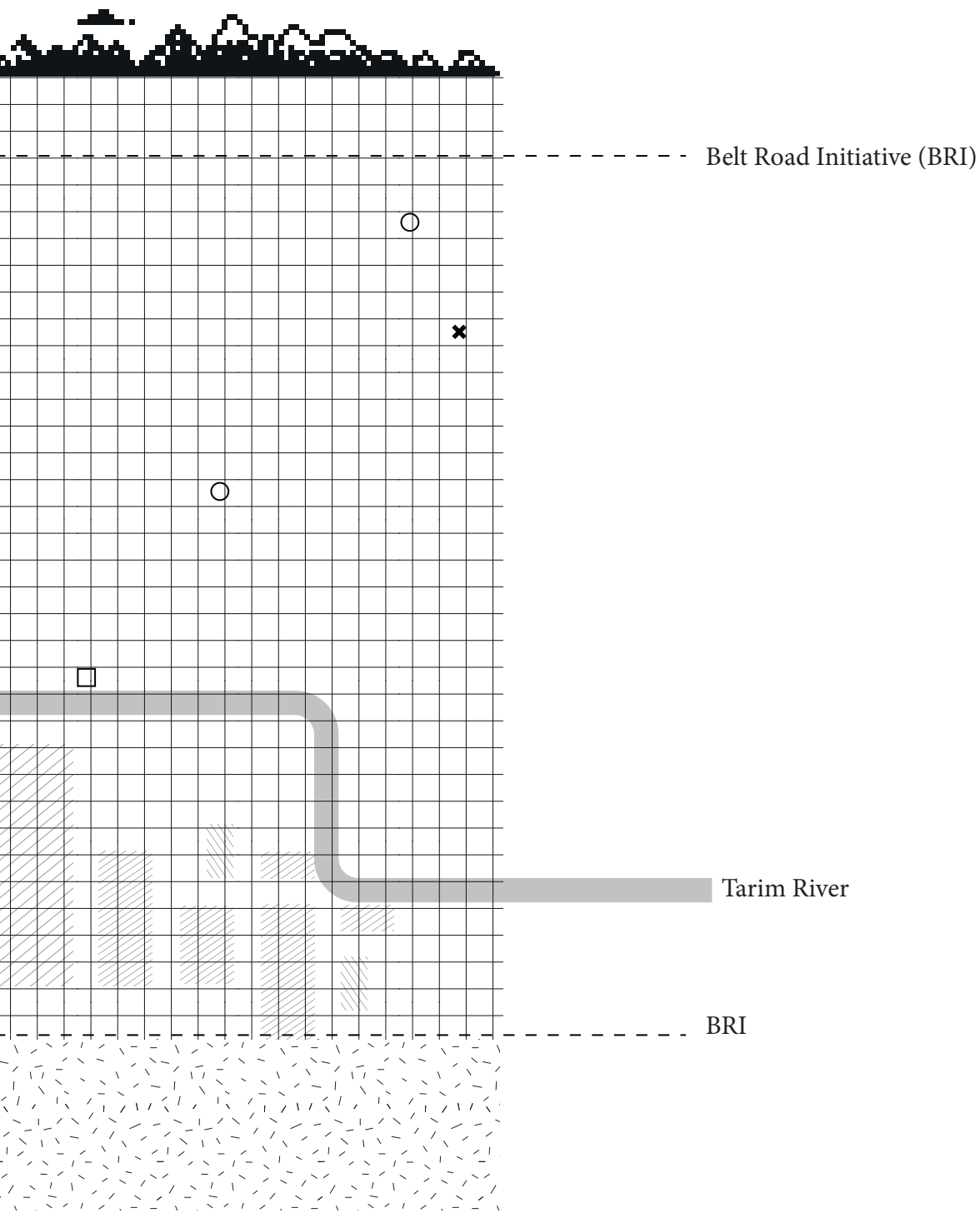
*“Masterplan Strijp Philips, Eindhoven,”  
model view, 1999–2000. [Andrea Branzi, et.  
al.]*



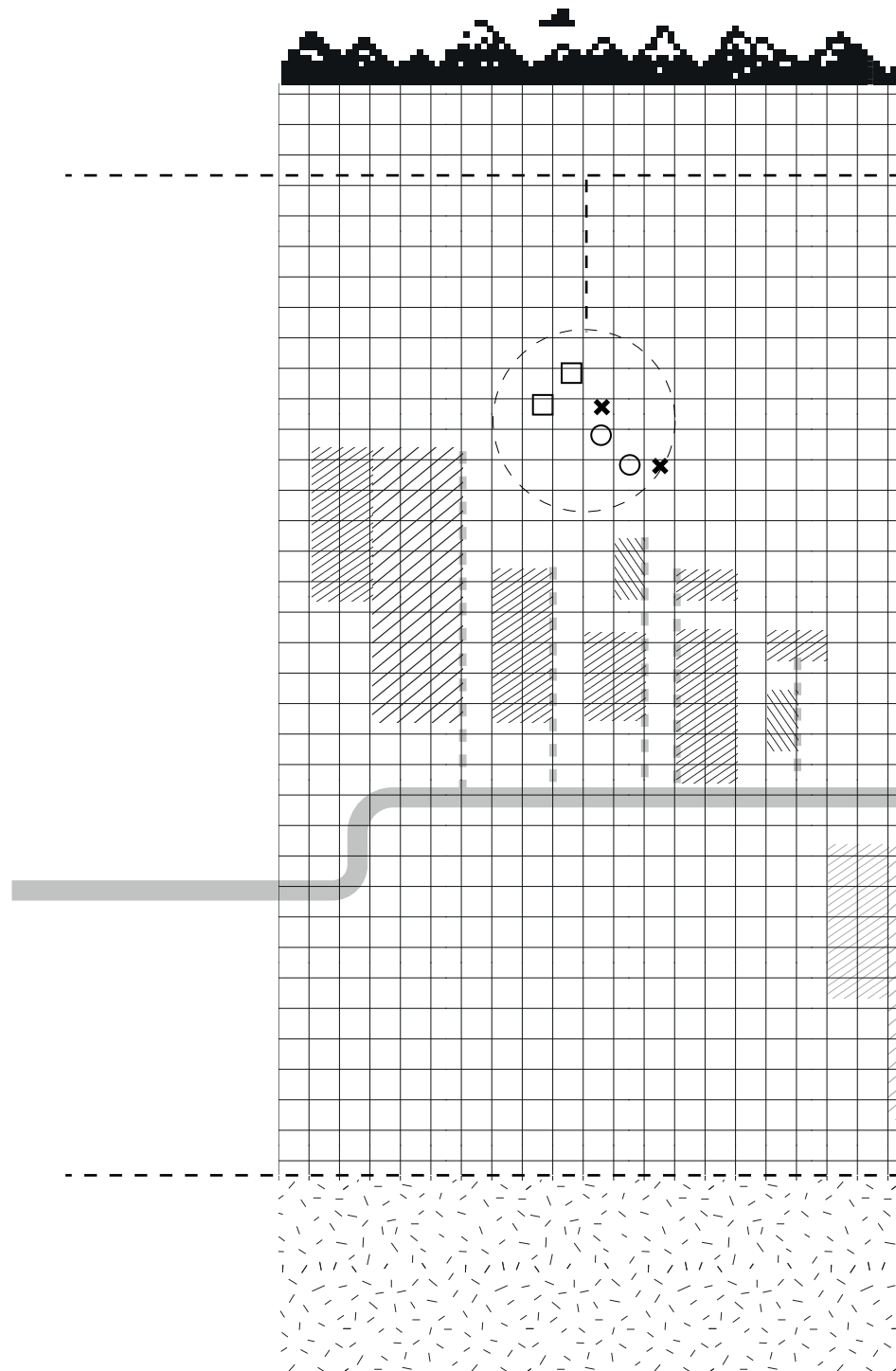


This is the current situation. Industries scattered, whilst the agriculture is reliant on the river source.

Current industries and logi

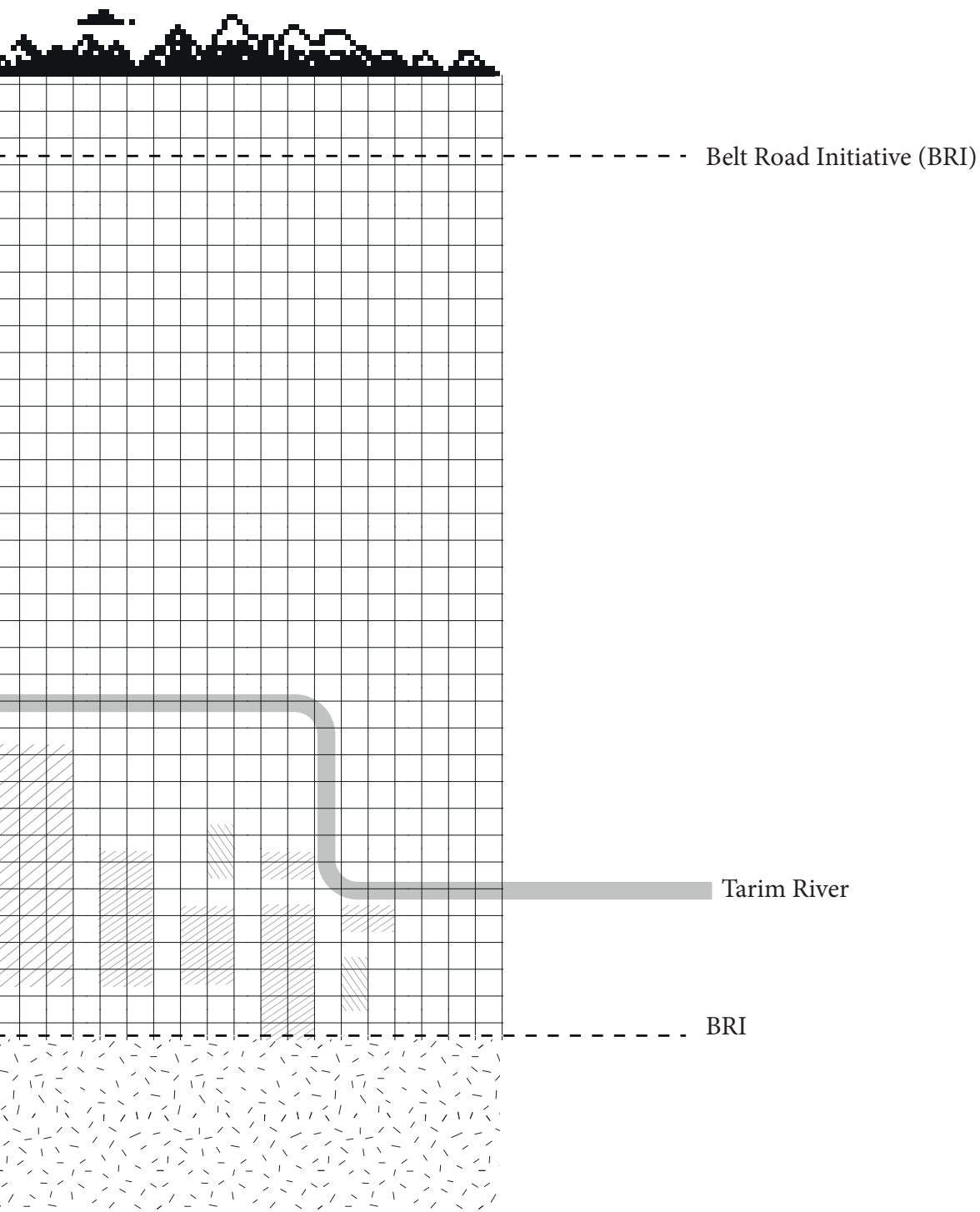


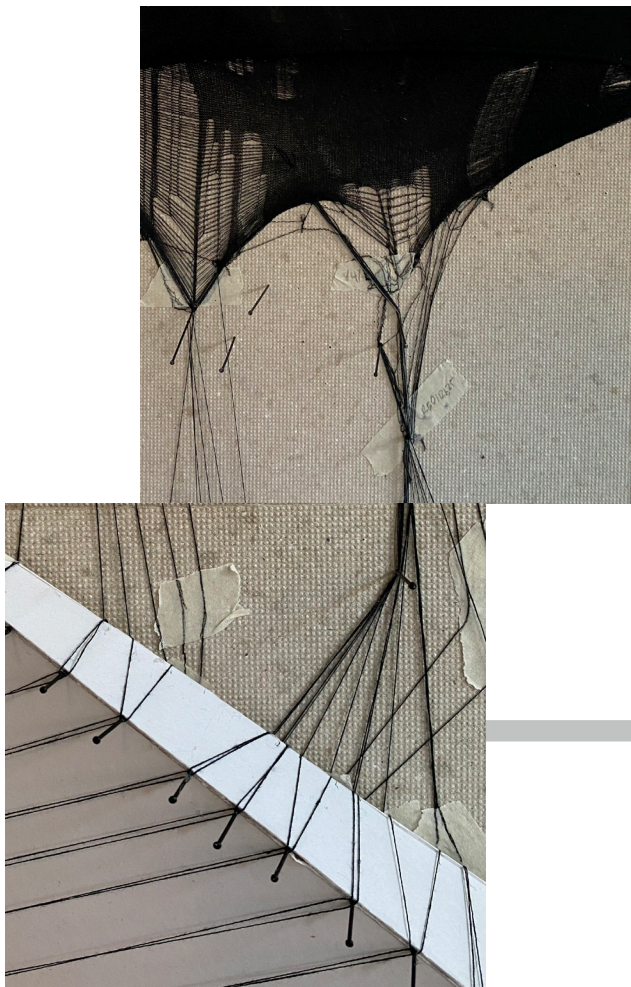




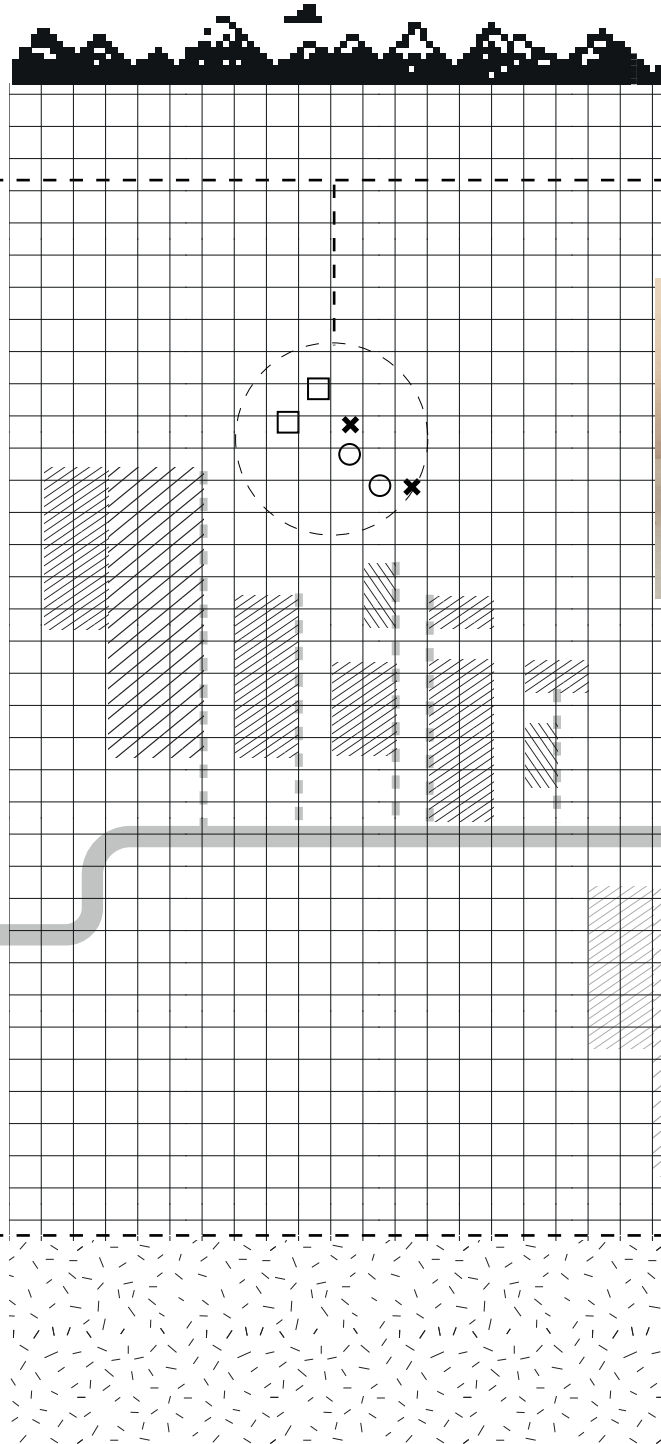
To be more visible, I believe the industries should be gathered together in clusters to creat a visible mass  
To give the city a visible identity, there is a possibility for the architectural language to be informed by the industry it hosts.

Gather to n



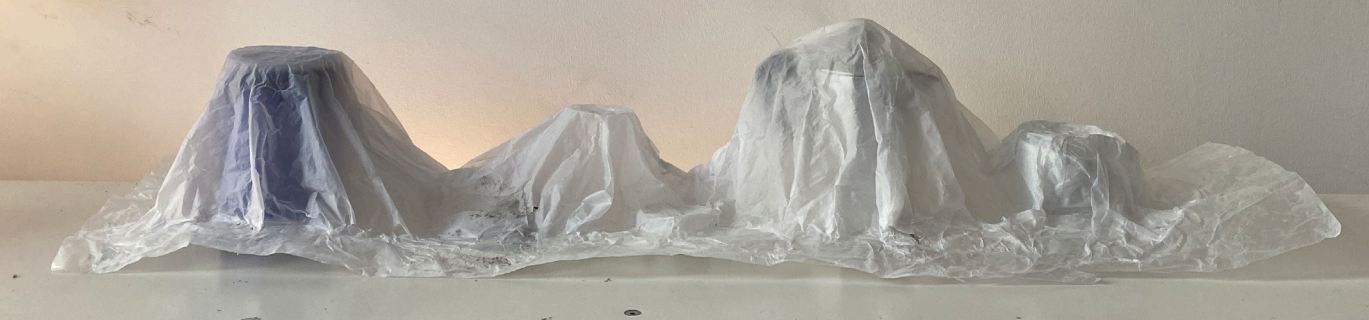
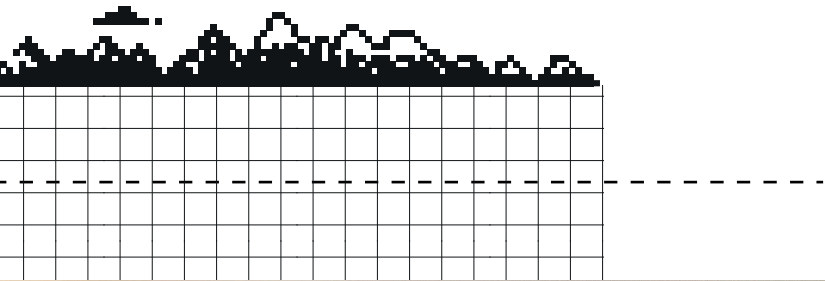


*Modus Operandi II*

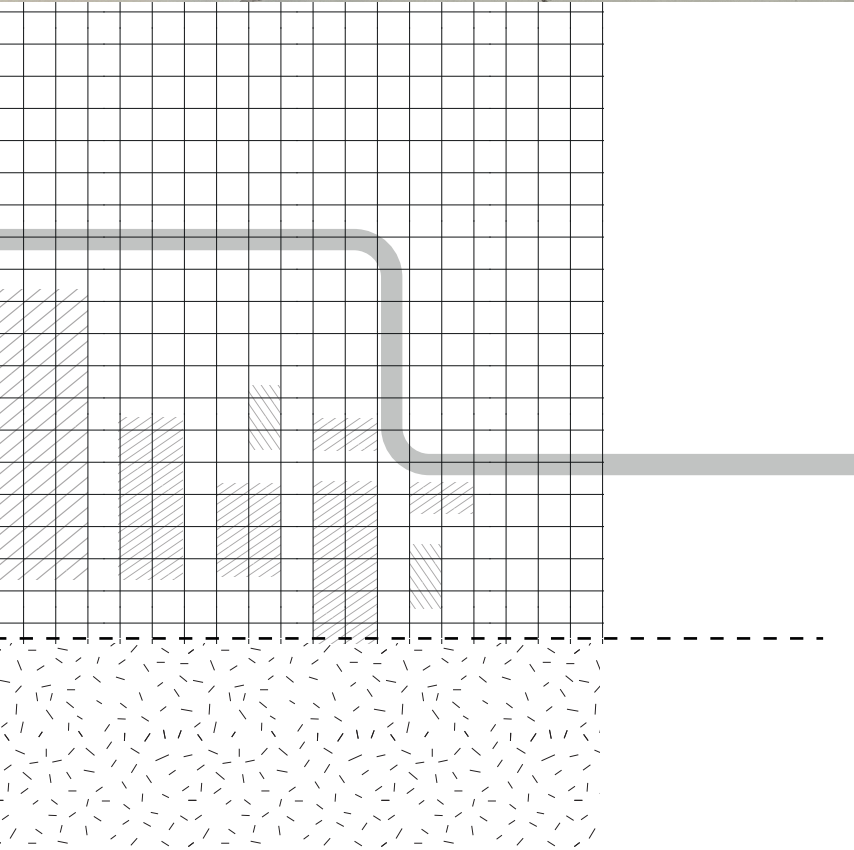


Indeed the lightweight tensile structures by Frei Otto are suggestive of an architectural language which can take on many forms useful for housing different types of buildings and needs.

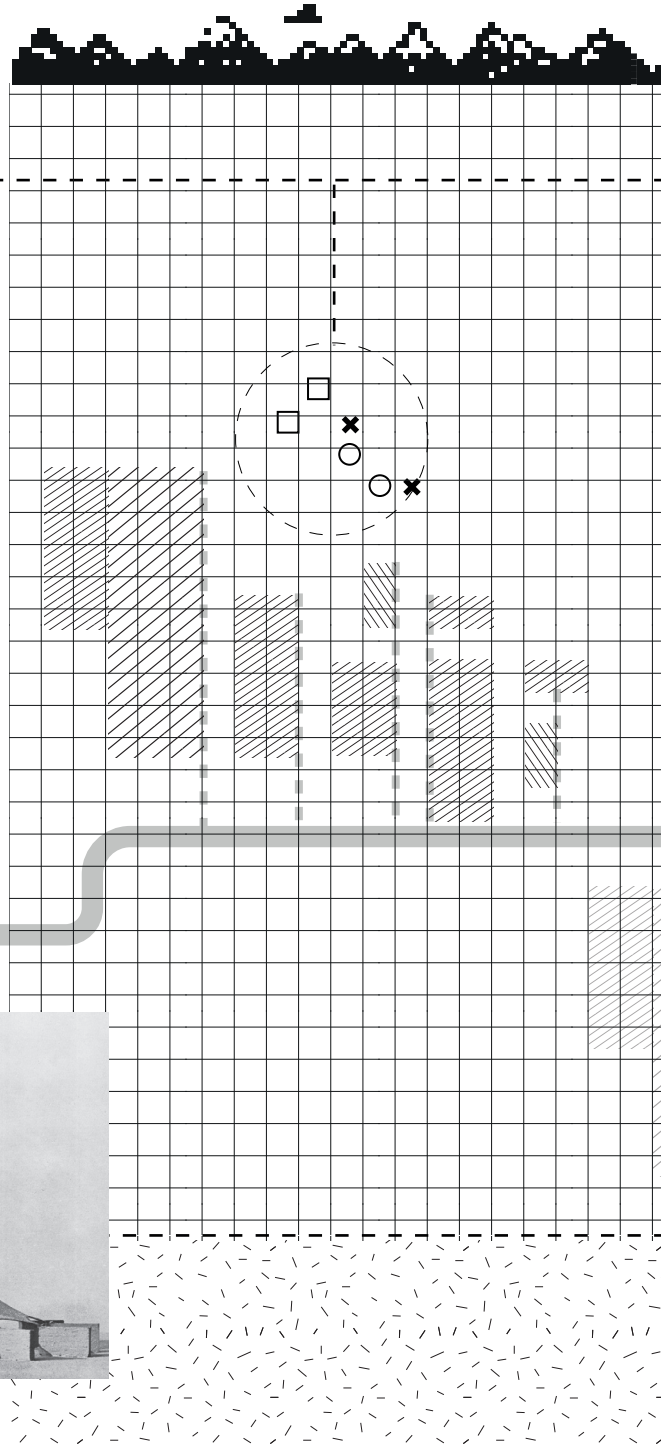
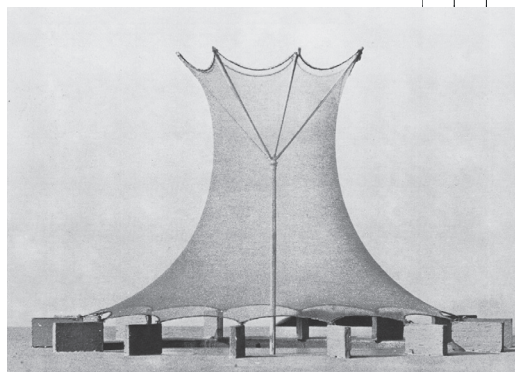
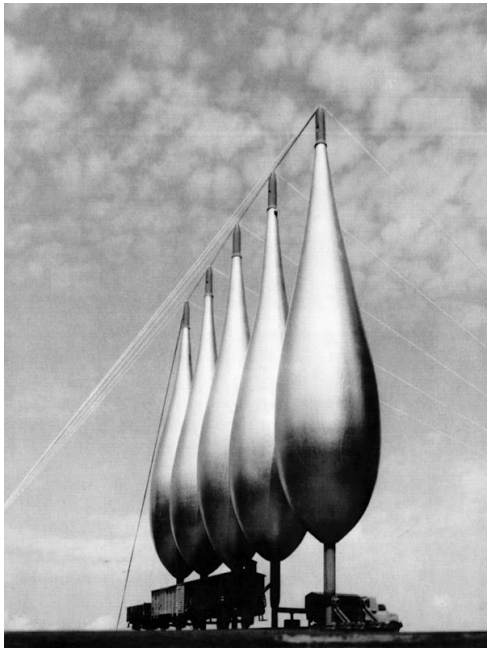
Towards an architecture



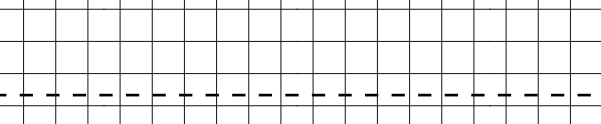
*Modus Operandi III*



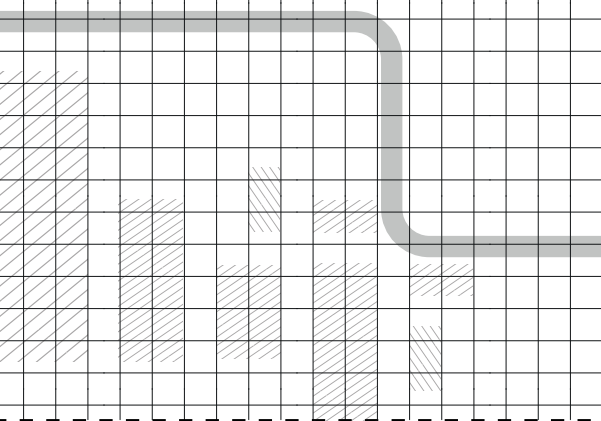
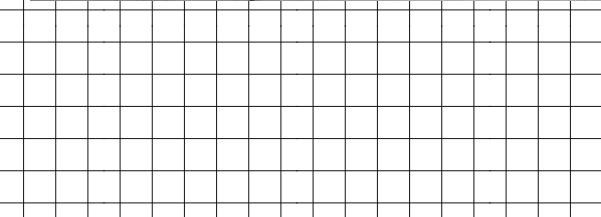
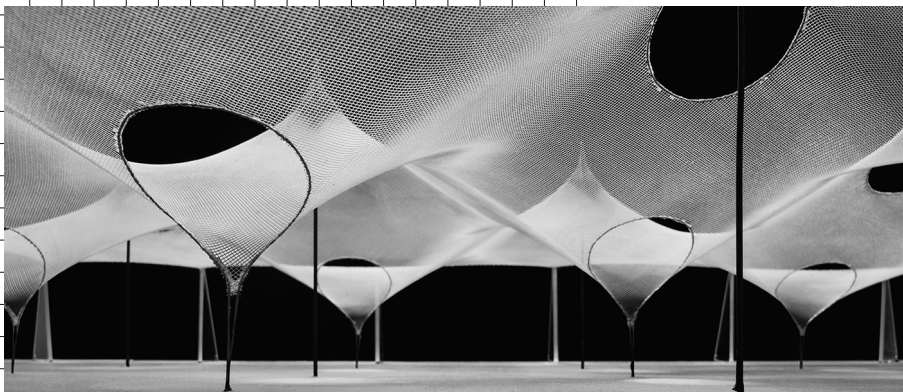




Fabricate its own structure. 1

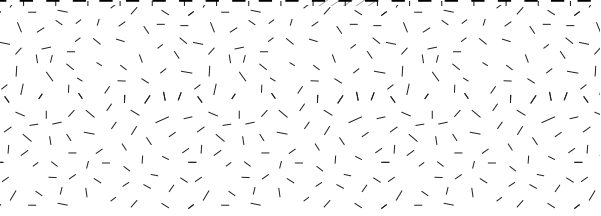


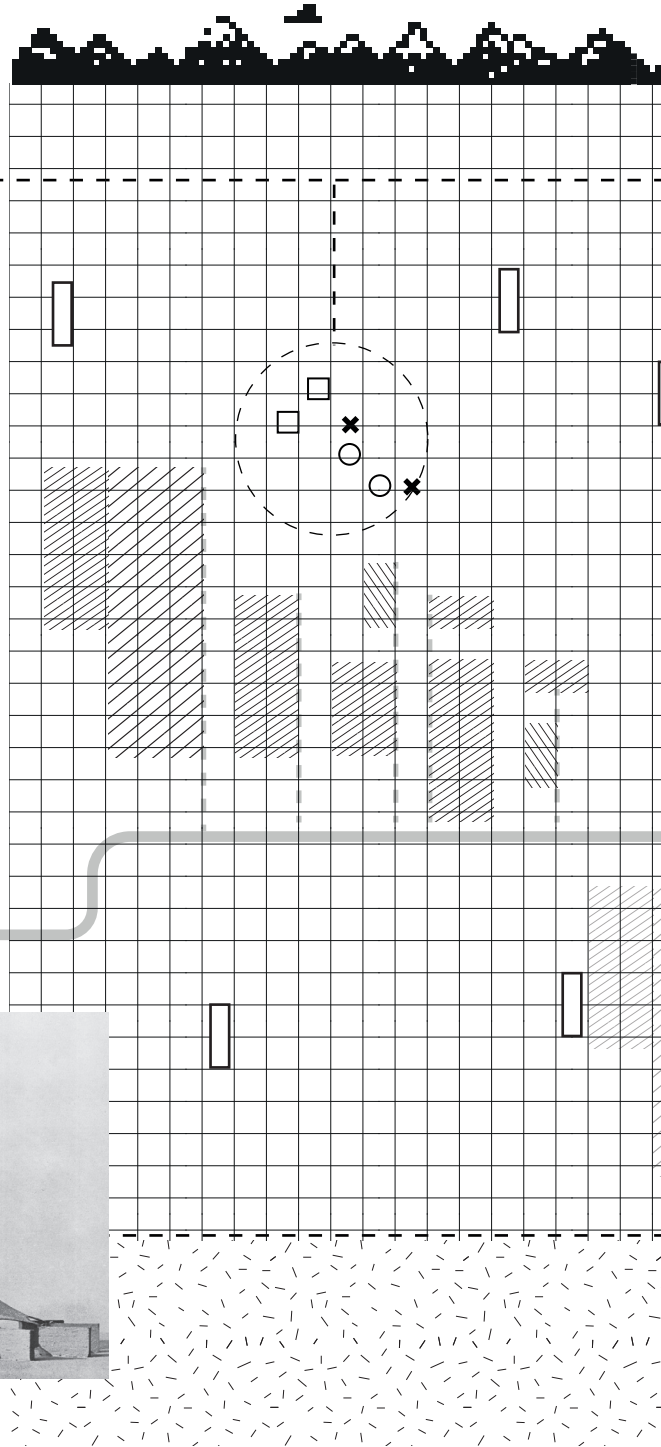
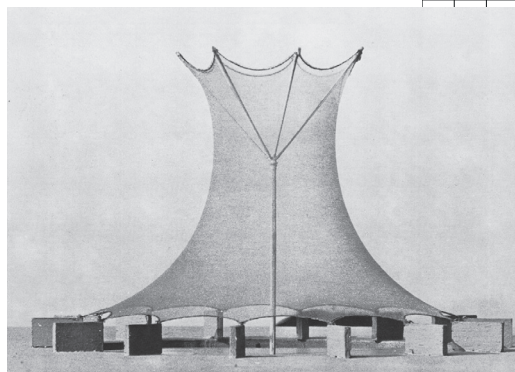
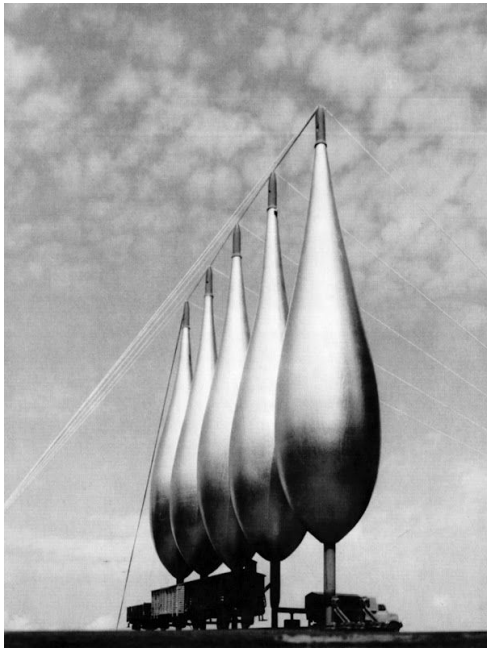
Belt Road Initiative (BRI)



Tarim River

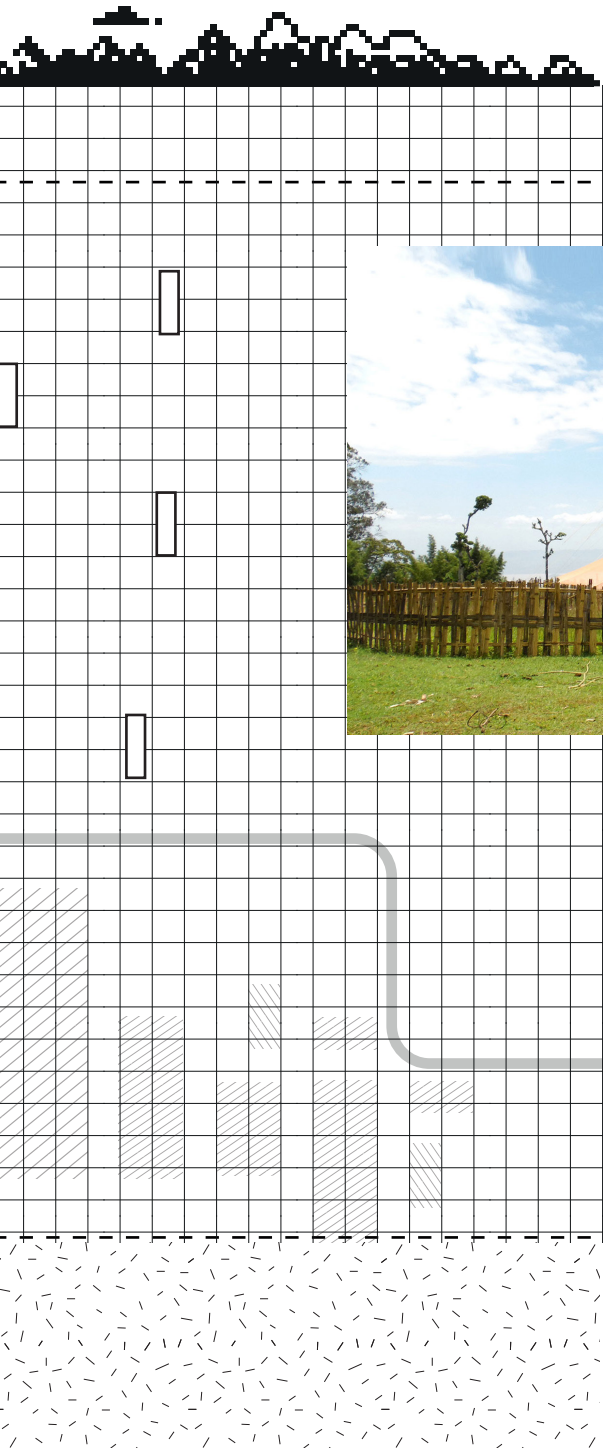
BRI





Including the water tower, which is needed to provide the visible city with a water source independent from the river before the glaciers and rivers run dry. Here we can see how Otto's structures resemble that of architect Arturo Vittori's water tower which uses large swathes of material to capture moisture in the air to collect for potable water.

Establish independen



Belt Road Initiative (BRI)



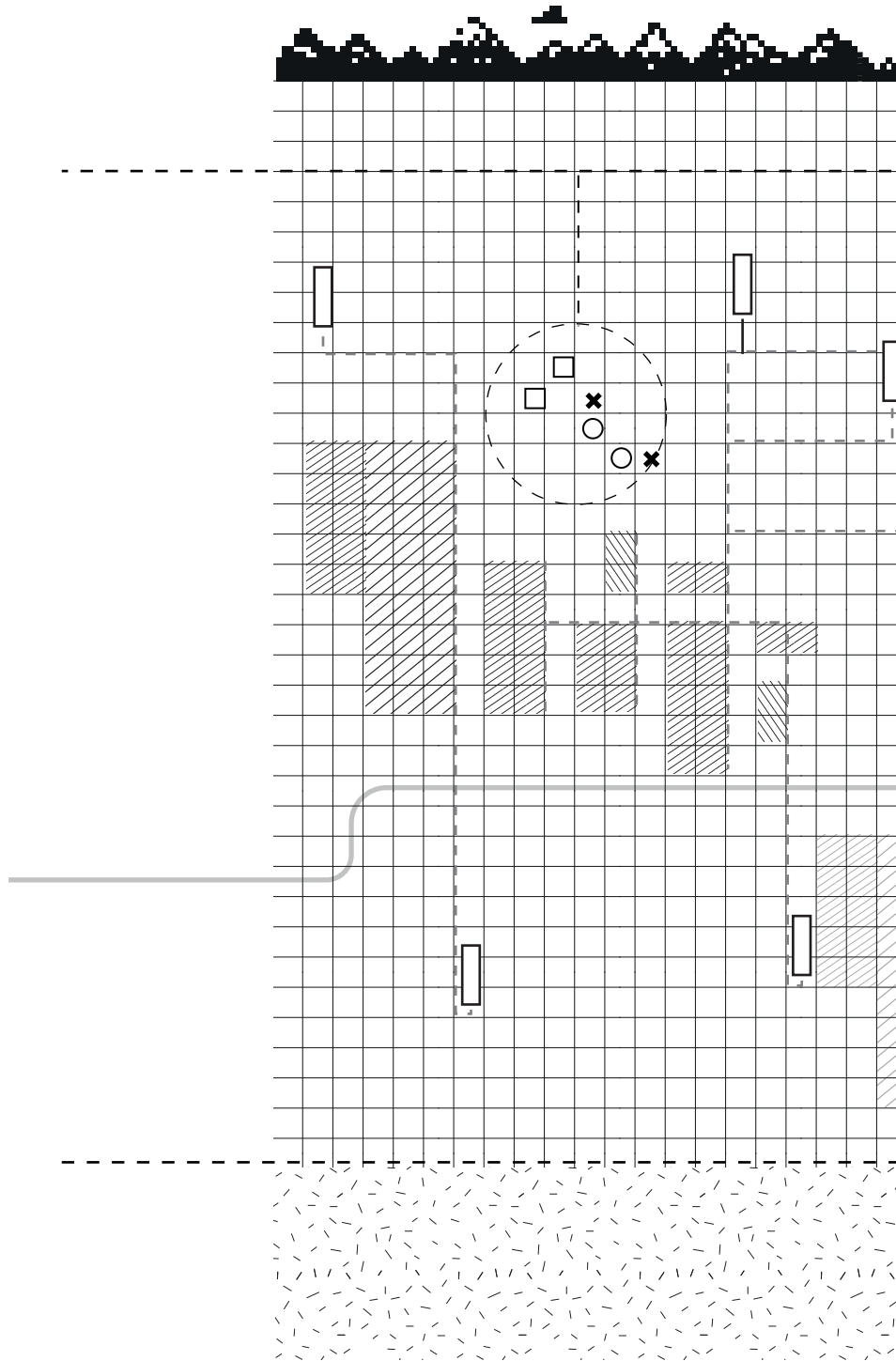
*Arturo Vittori, Architecture and Vision*

Tarim River

BRI

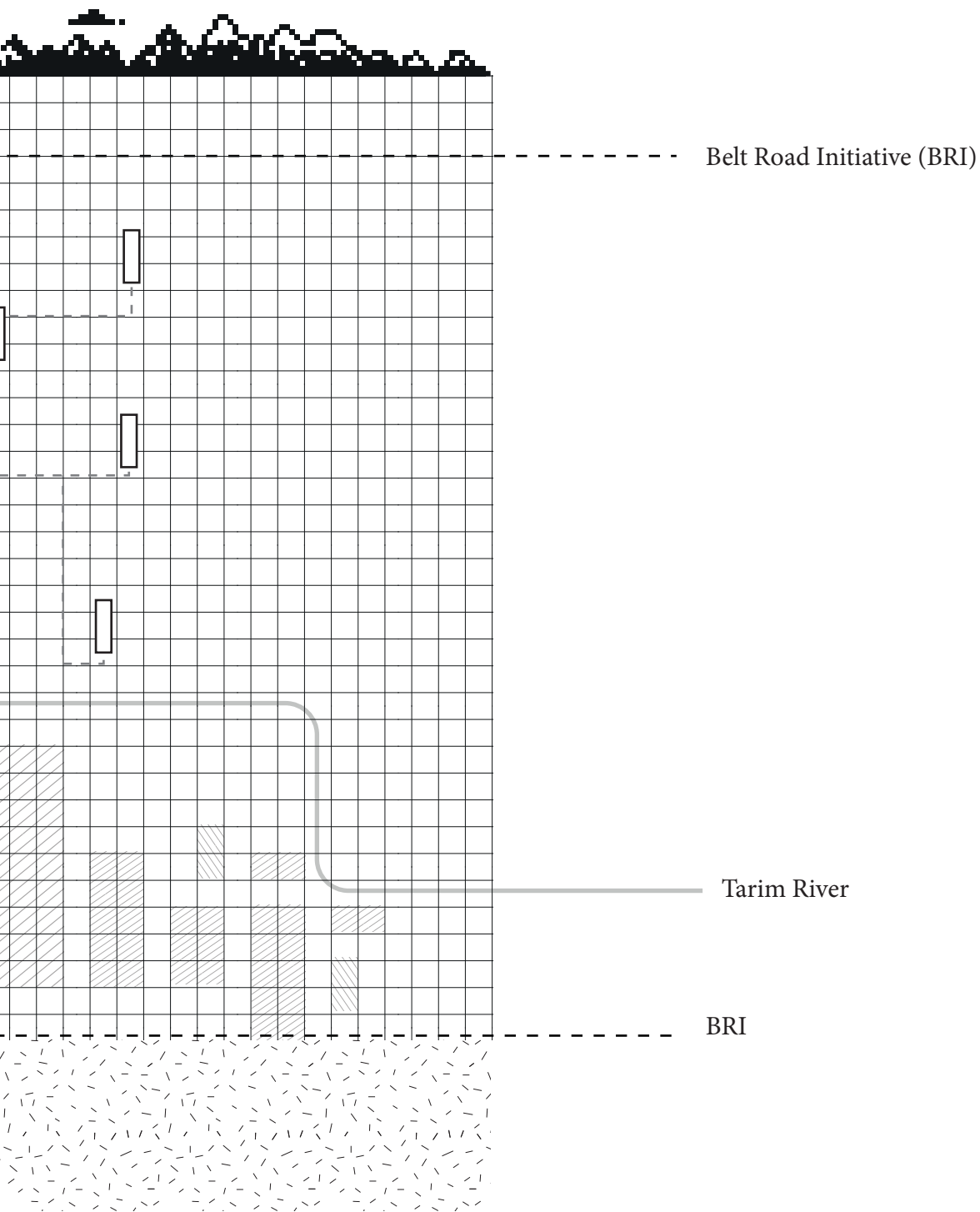
Independent water source



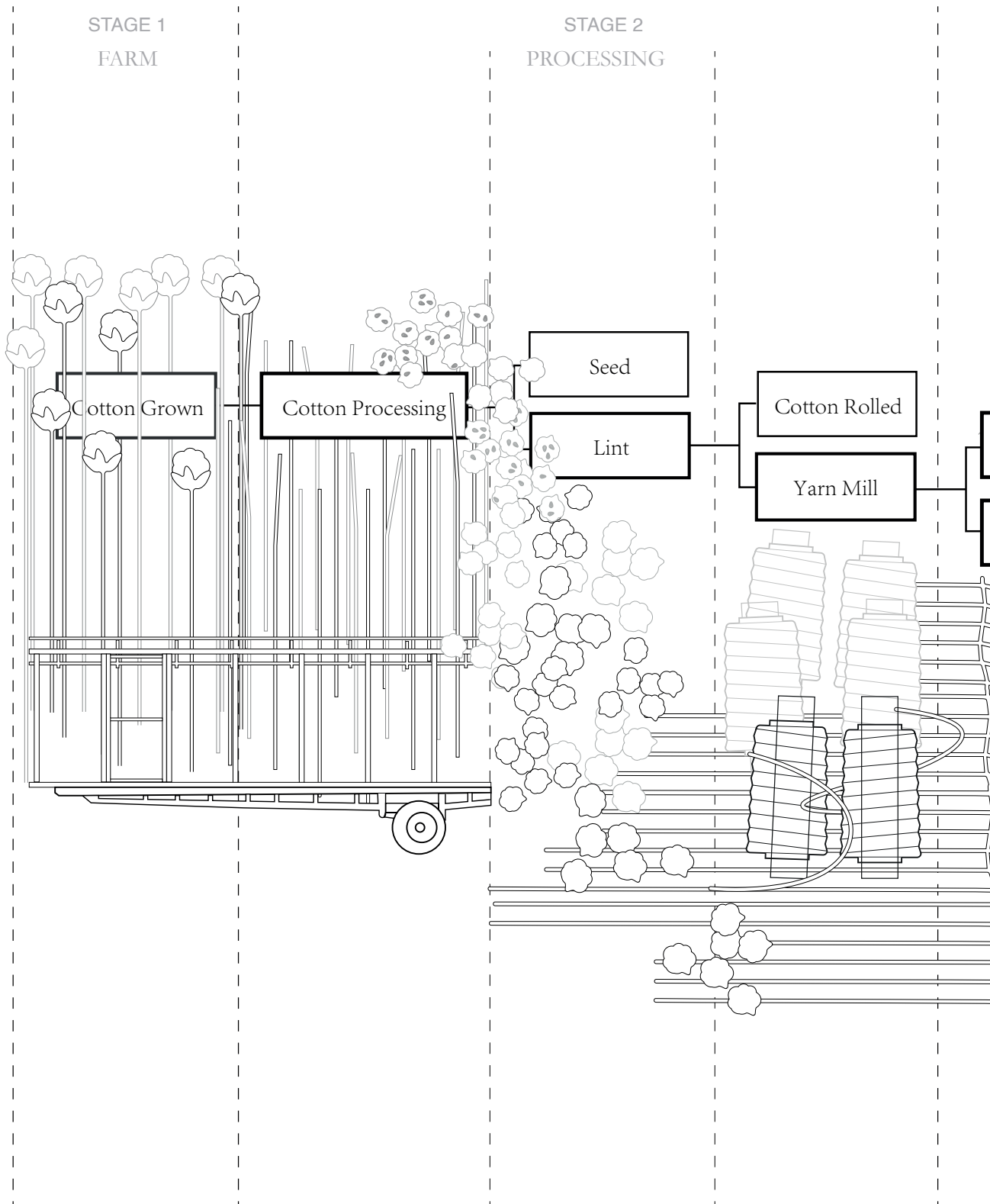


Finally once self-sufficient, the system can be disconnected from the river entirely allowing to source was from the air autonomously.

Once operational disconn

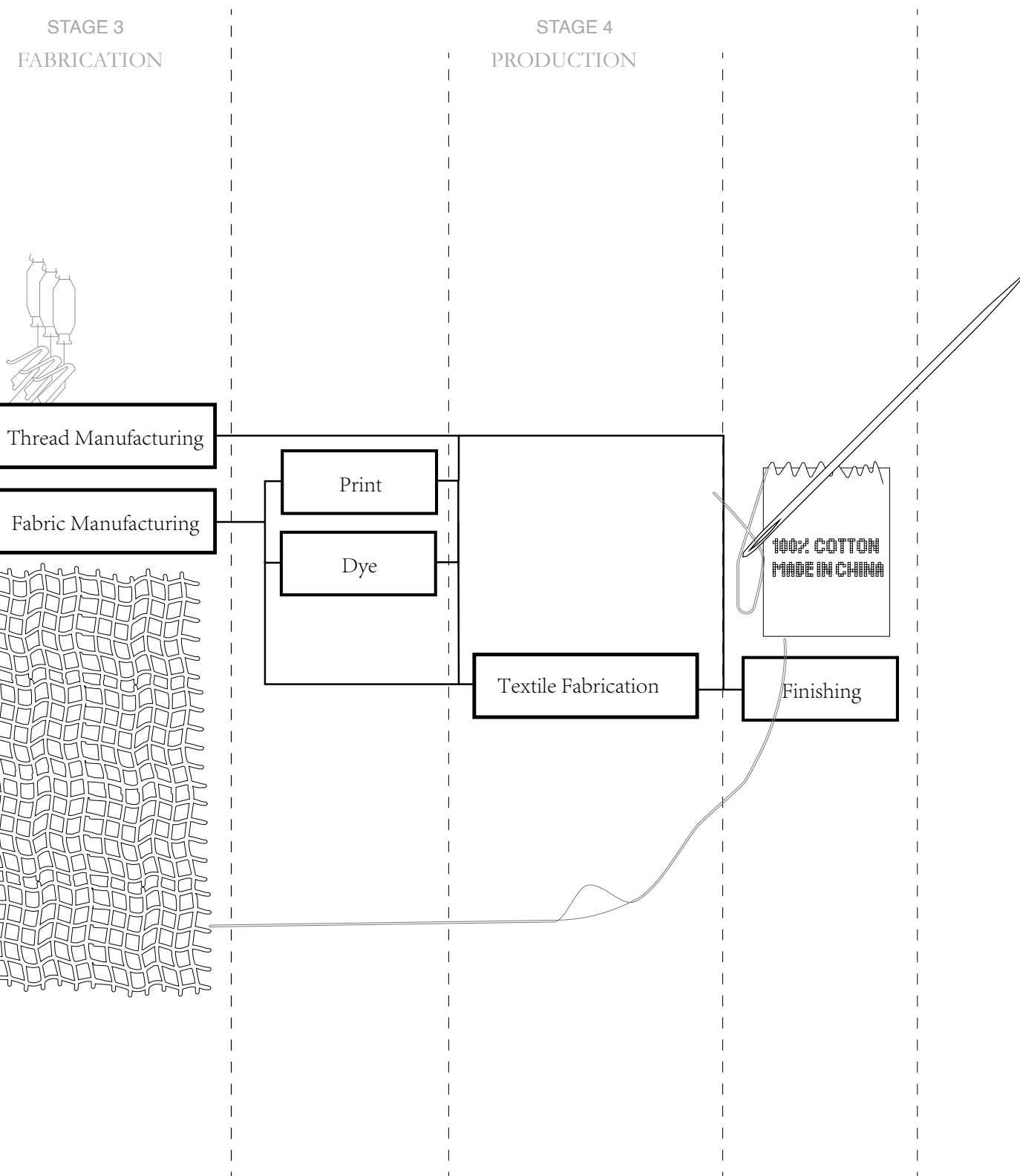


nect from the river water

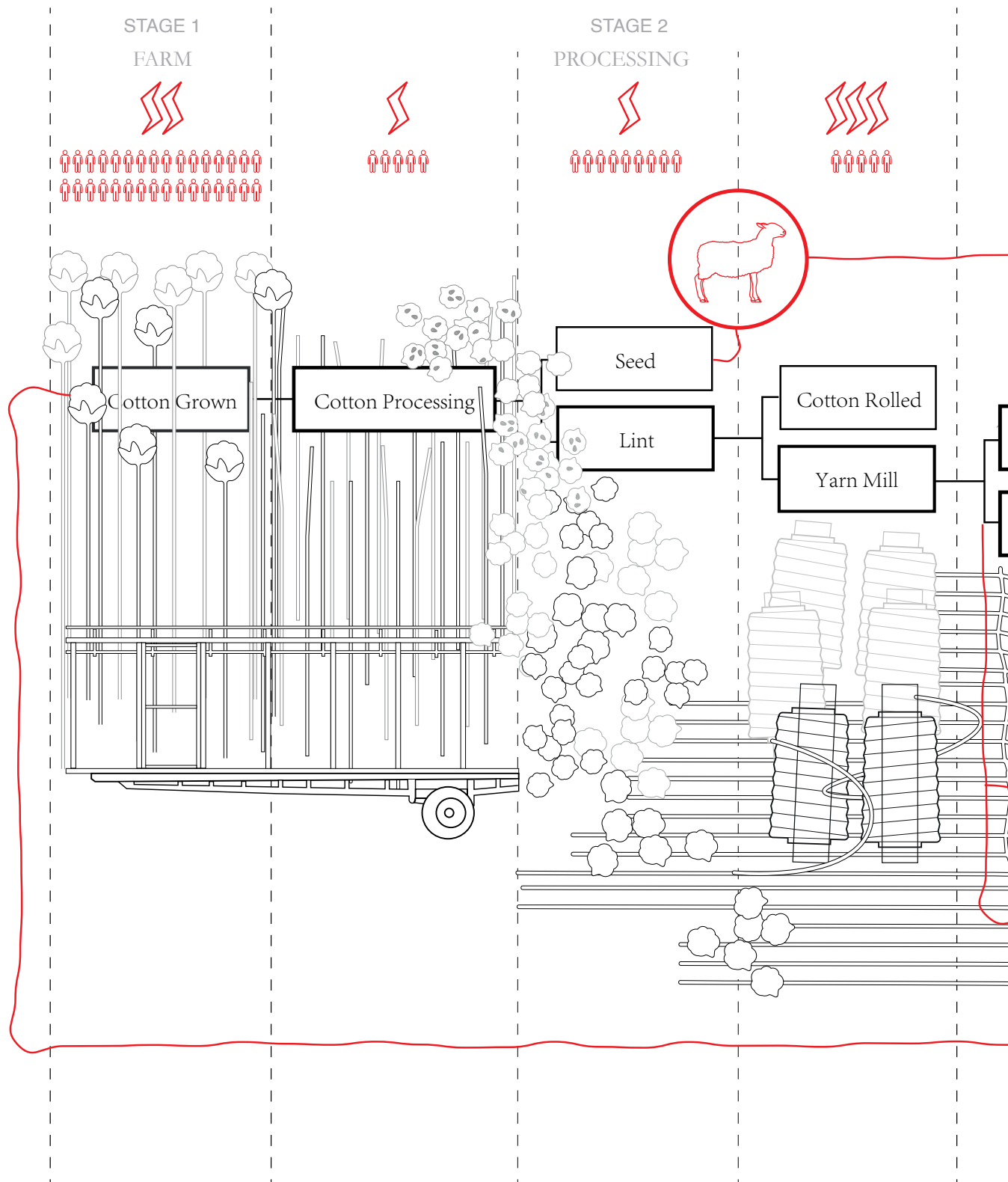


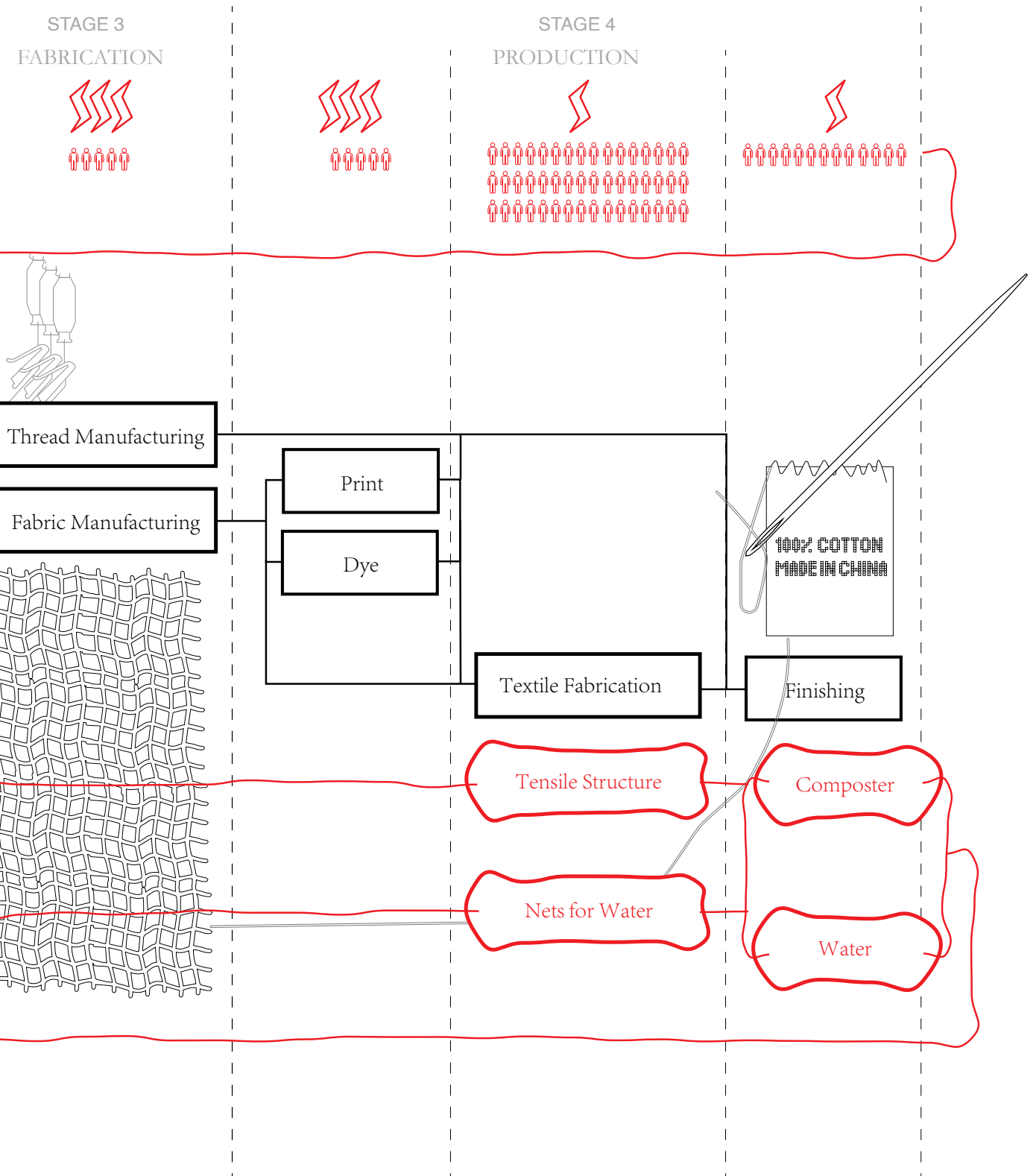
The programme takes the current systems of production from farm to product and hypothesis how it can try to create a more closed cycle for the city.

Take existing syste

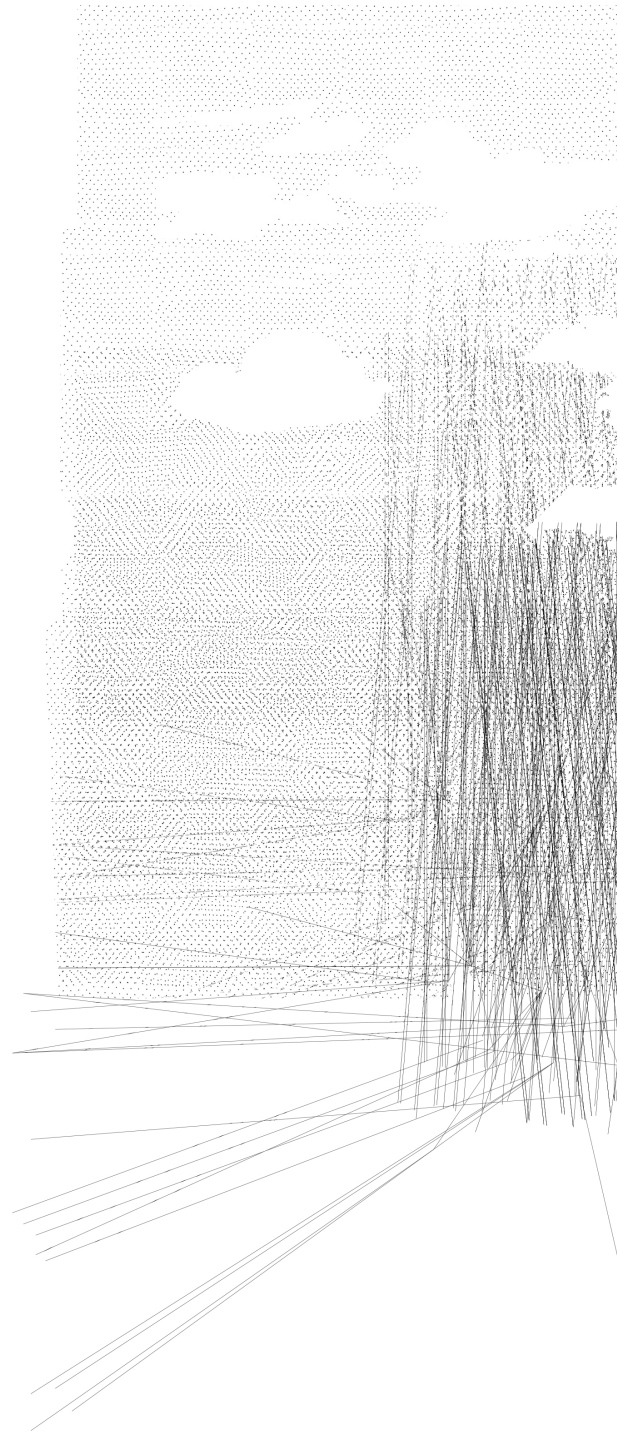








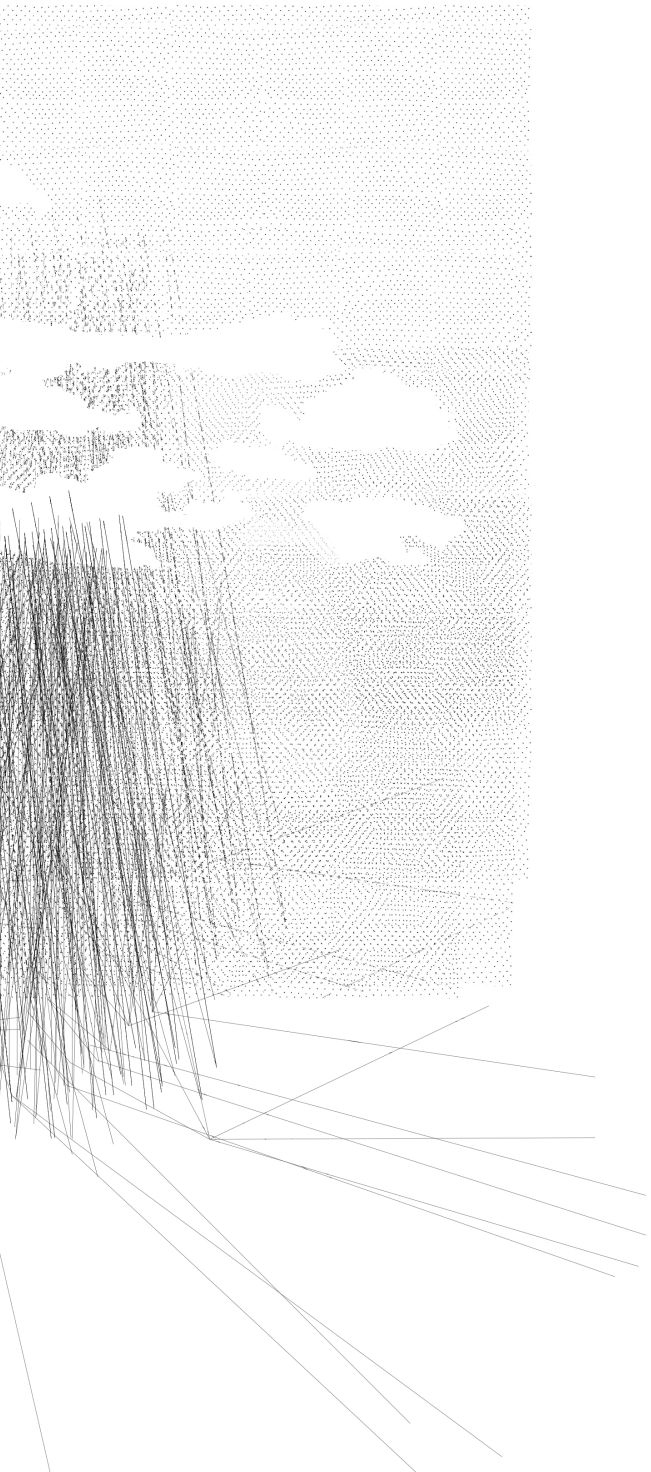
on to close the loop



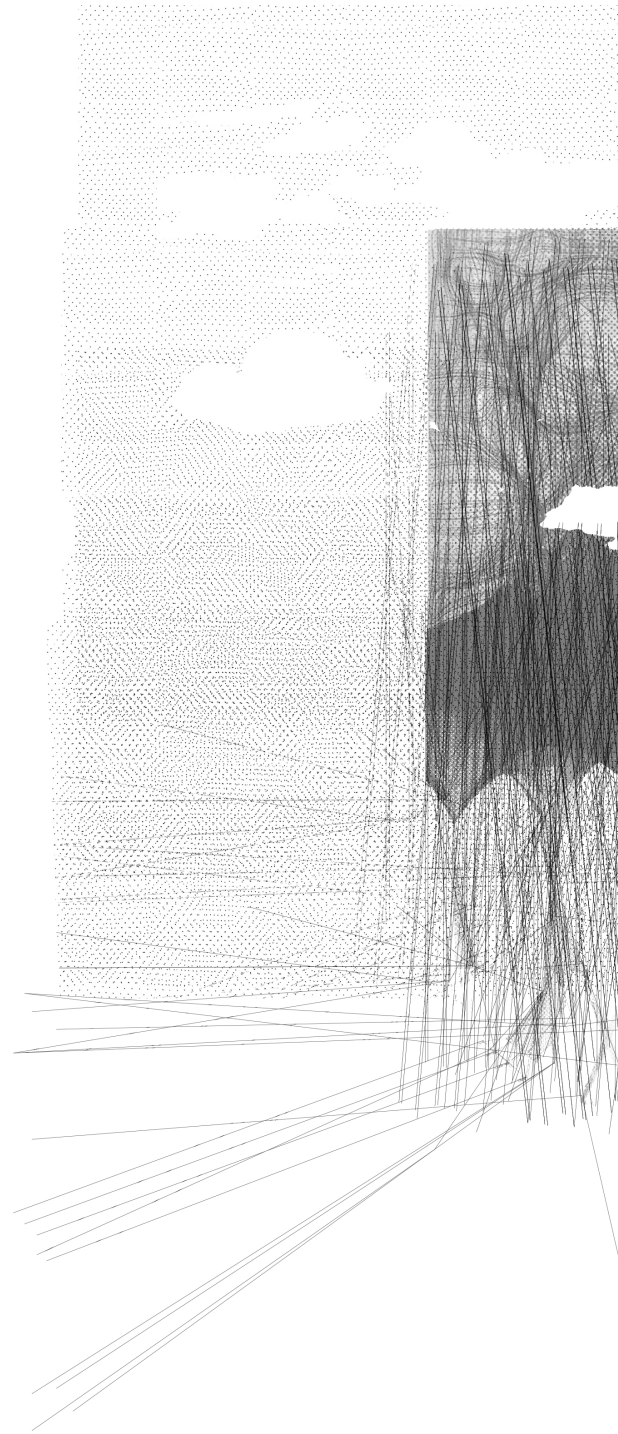
### The Mirage

The mirage is an attempt to make these invisible cities visible, by imagining these fuzzy networks and metropolises hidden in the region of Xinjiang, China coming together, massing themselves into a visible entity for the world to see. Of course, this massing and knotting create obscurities of their own.

Massing th







And thus concludes my research presentation on invisible cities, a tale of tomorrow architecture, a critical reflection on economic inequality, social injustice and environmental degradation. The project weaves a possible future of autonomous water production, a modernisation of labour and visibility embodied through architecture

To make a v

