

Cambridge University Press

978-1-107-07156-8 - The Ecology of War in China: Henan Province, the Yellow River, and Beyond, 1938–1950

Micah S. Muscolino

Index

[More information](#)

Index

- Administrative Yuan, 51, 131, 135, 222
 advanced organic economy, 11, 16
 agriculture, armed forces dependent upon, 7–8, and climate, 90, 92–93, 117–118, and dike construction, 33, 50, 52, 125, 136, 141, disruption by warfare, 17–18, 19, 89, 100, 172, 236, female participation in, 142, 154–155, 170, 219, 245, and Great Leap Forward, 242–243, in Henan, 13–14, 93, land reclamation, 20, 60, 81–86, 165–166, 177, and livestock, 112–113, 148, and military grain transport, 97, postwar obstacles to, 191–193, 197, 204, recovery of, 20, 196–197, 208–209, 213, 227–235, 237, sedimentation and, 184–185, 232–233, as solar-energy system, 11, 134, and wartime floods, 12, 57, 90–92, 120, 128, 134
 agro-ecosystems, and energy, 18–19, 100, 175, 234, 236–237, and militaries, 90, 100, 116, post-conflict recovery, 20, 172, 200, 210, 230, 234, and refugee flight, 85, 169, 175, 212, 233, UNRRA-CNRRA reconstruction of, 172–173, 200, 203–204, 234, 242, vulnerability of, 3–4, 17–18, war-induced disruption of, 19, 23, 58, 69, 169
 American Civil War, 239
 Anhui, dikes in, 35, 46, 52, 121, 135, floods in, 2, 29–30, refugees, 4, 31, relief grain from, 109, sediment deposition in, 184, shelterbelts in, 216
 animals, as energy source, 6, 10, 11–12, and militaries, 5, 238, wildlife in flooded area, 66, 85, 178, 235, wildlife in Huanglongshan, 84, 86 (see also specific types of animals)
- Baimagou, 53
 Baitan, 43, 138
- bandits, in flooded area, 66, 221, as guerillas, 143, in Huanglongshan, 82, 84, and Nationalist military collapse, 114, as threat to refugees, 145, 154
 Baoji, 17, 79, 158, 161
 baselines, for war's ecological impact, 18, 85–86, 243
 Beijing, 1, 23, 38, 46
 Beiping, see Beijing
 Belden, Jack, 56
 Belgium, 238–239
 Bengal, 2
 Biggs, David, 240–241
 biomass, for dike repairs, 48, global demand in world wars, 238, scarcity in Henan flooded area, 159, 206, 233, 235, 237, shortage in North China, 77, 86, 159, sold as fuel, 60, 75–77, 86, 193, and trophic pyramids, 8
 birds, 66, 178
 Blackburn, David, 246
 Boserup, Ester, 170
 Brady, Lisa, 239
 Brook, Timothy, 38
 Burke III, Edmund 6
- Cao Wenzhang, 152–153
 Caoli, 66
 Chang'an, 159
 Changsha, 53
 Cheng Qian, 25, 27, 34
 Chen Ruzhen, 133
 Chepil, W.S., 188
 Chiang Kai-shek, and breaking of Yellow River dikes, 1, 22, 25–26, 240, and Henan famine, 89, 106, and militarized water control, 34, 41–42
 Chinese Civil War, ecological dimensions, 3, 204, 236, and epidemic disease, 180–181,

- 183–184, expanding Communist influence, 177, 220–221, 225–226, 230, flooded area's role in, 219–220, 225–226, and Huayuankou closure, 202, 238–239, impediment to recovery, 221–223, 224–225, inflation during, 96, and militarization, 245–246
- Chinese Communist Party (CCP), in Chinese Civil War, 3, 177–178, 197–204, 218–230, 239, competition for food, 90, 114–119, and militarization, 245, and refugees in Shaanxi, 84, 162, 166, 171, during Sino-Japanese War, 1–2, 38–39, 66, 125, 197, 237
- Chinese National Relief and Rehabilitation Administration (CNRRRA), health and medical work by, 180–184, and postwar construction, 173, 175, 190–200, 204, 206, 212, 215–218, 230, 233–235, and Huayuankou breach closure, 173, locust control, 213–214, and refugee relief, 174, 205–206, 242, relations with Communists, 224–226, 229
- cholera, 63, 145, 160, 179, 181, 182
- Chongqing, 27, 34, 106
- Christian, David, 118
- Ci River, 16, 29
- Ciyuan*, 10, 12
- climate, of Henan, 13, and famine, 90–95, 117, 118
- collaborators, grain seizure by, 114–116, and hydraulic engineering, 38–39, 43–46, 51, 125–128, 141, shelterbelts planted by, 76, and smuggling, 73
- collective defense, 116–117, 197, 221–222
- commerce, 16, 70, 72–75, 113, 179, 191
- commodity chains, 8–9
- complex systems, 6–7, 19
- compulsory purchases, 95–100, 105–108, 112, 139
- conscription, and gender, 152–155, 170, Henan as site of, 70, 99–100, 112, for military, 19, 50, 64, 134, 162, 222–223, of labor, 39–40, 47, 51, 54, 97–98, 100, 121, 125, 131, 237
- cooperatives, 218–219, 213
- Cronon, William, 20
- Cummings, Bruce, 240
- Dagongbao*, 80
- Daolinggang, 121, 122, 130, 132, 151
- deforestation, in Henan, 13, 76, 148, 170, of Loess Plateau, 14, 81, in North China, 18–19, in Shaanxi, 143, 163–166, 170–171
- dikes, in late imperial China, 14–15, 19, 57, deterioration in war, 55–56, 65, 140, 231, 235, 244–245, and disaster control, 2, 32–33, 42–43, 60–62, 64, 71–72, local cost of constructing, 128–135, 136–139, and military conflict in world history, 239–241, and militarized water control, 34–37, 41–43, 46–55, 65, 78, 120–125, 136, 141, 246, Nationalist army's breaching of, 1, 3, 22, 25–32, 57, 60, 117, 239, 242, refugees living atop, 61, 75, 179–180, refugees working on, 151, 155, 177, 180, Huayuankou closure, 187, 201–204, in occupied territories, 37–40, 43–46, 51, 125–128, postwar reconstruction of, 175, 197, 208, 231, strategic breaching in Chinese history, 17, 22, willow trees planted on, 75–76
- Dikötter, Frank, 243
- disease, and famine, 117, 145, in flooded area, 63–64, 78, 180–184, 200, in Huanglongshan, 82, 168–169
- dogs, 148–149, 151
- drought, and climate in Henan, 13, 231, and Henan famine, 88, 92–95, 100–102, 110, 115, 138
- Duan Yucai, 10
- dysentery, 63, 145, 181
- Eastman, Lloyd, 88
- El Niño Southern Oscillation (ENSO), 2, 90, 92–95
- energy, and agro-ecosystems, 17–19, 169, 172, 175, 241, biomass, 60, 75, 85, 193–194, 206, and complex structures, 6–7, for Communist forces, 114, 117, 119, conversion of, 6, definition of, 6, and disease, 180–181, and Great Leap Forward, 242–244, and famine, 88–90, 94–95, 101–103, 117–119, 142, and global history of World War II, 237–238, for human survival, 12, 19–20, 59, 206, and hydraulic engineering, 22–23, 26, 33, 50, 57–58, 120–128, 134–141, and land reclamation, 81, 86, and locusts, 94–95, 213, and military systems, 5–9, 12–13, 57, 118, 236–237, for Nationalist army, 95–102, 106–108, 112–114, 222, and post-conflict recovery, 20, 172, 192, 199, 202, 204, 208, 212, 230, and power, 21–22, and railroads,

Cambridge University Press

978-1-107-07156-8 - The Ecology of War in China: Henan Province, the Yellow River, and Beyond, 1938–1950

Micah S. Muscolino

Index

[More information](#)

Index

287

- 56, regimes, 11, 12, 16, 196, 208, of rivers, 5, 12, 21–23, 28, 56, and social metabolism, 4–5, 7, subsidies from UNRRA-CNRRA, 173, 191, 200, 201–203, 233–234, 235, 242, translating, 9–11, 12
- epidemics, see disease
- environmental infrastructure, concept of, 18, 200, war's impact on, 19, 59, 69, 89, 172, 236, 241, reconstruction of, 233–234, 237, 242, 244, Yellow River as, 23
- erosion, in Huanglongshan, 81–82, 143, 164–165, 167, 170–171, in North China, 19, 77, in Shaanxi, 166, of sandy land by winds, 185, 188–189, 209–210, 216, 233, by water, 184, 187–188
- Evenden, Matthew, 8–9
- famine, and conscription, 99, and Great Leap Forward, 242–244, and gender, 155, in Henan (1942–1943), 2–4, 87–95, 101–119, 134–139, 143–149, 191, and migration, 17, 69, 153, 155–159, 169–170, in North China (1876–1879), 93, 118, in Republican period, 19, 231, and war, 87–88, 89
- family, see households
- Fanjia, 196
- farming, see agriculture
- Feng Zhaoxue, 60
- fertilizer, 82, 185, 190, 204
- Fifteenth Group Army, 36, 121
- First War Zone Command, 25, 27, 34–37, 51, 54, 99
- Flanders, 238–239
- floods, and Henan's geography and environment, 13–16, and migration to Shaanxi, 17, of Yellow River (1938–1947), 1–4, 23–68, 71–79, 90–91, 120–141, 172–177, during 1950s, 239–241, 244, and environmental crisis in North China, 19, 59
- fodder, and Henan famine, 102, 107–108, 137, seizure by armies, 67, 97, 100, 137, 143
- food, for civilian laborers, 47, 52, 54–55, 127, for Communist forces, 114–117, during Great Leap Forward, 242–244, for Henan's civilian populace, 93, for Huanglongshan settlers, 82–83, 166, 168, inability to transport, 105, 108, 110, and land reclamation, 81, 83, livestock consumed as, 112–113, 148, for militaries, 2, 5, 12, 19, 89–90, 118, 143, 237–238, for Nationalist army, 88, 90, 95–102, 107–108, 111, 113, 221–222, prices, 102–105, and refugee populations, 61–62, 70, 77, 91–92, 143–146, 150–158, 162, 170, 174, from UNRRA-CNRRA, 172–173, 195, 203–209, 215–216, 225, violent competition for, 90, 118, war and famine, 87–89, 117–118
- food chains, 7–8
- Forman, Harrison, 156
- fuel, for militaries, 5, 11–12, 237–238, fossil, 16, 196, 208, 238, for dike repairs, 134, gathering by refugees, 60, 75–77, 85, 86, 144, 149, 165, 193–195, 206, needed by disaster victims, 61, 75, prices, 103, refugee pressure on, 170, scarcity in Henan flooded area, 77, 181, 188, 195, 200, 206–208, 242, 244, seizure by armies, 97, 137, shortages in North China, 19, 76–77, 142–143, for tractors, 212, 226–227
- Fugou, 4, dikes in, 33–35, 43–44, 52, 55, 71, 121–123, 134–136, 176, floods in, 29–33, 65–66, 121, 124, 138–140, 175–179, 196, locusts, 94, 213–214, malaria, 183, military activities in, 27, 221, 224–225, nutritional survey, 182, reconstruction and recovery in, 191–194, 196–199, 206–212, 229–231, refugees, 62–65, 72–75, 143–145, 149, 152–154, 160–161, 177, smuggling in, 73–74, soils, 189, 233
- Gansu, 17, 109, 161
- Gao Zhaolin, 129
- Gaoxian, 44, 45
- Garnaut, Anthony, 93
- gasoline, 196, 212, 226
- gender, 42, 149–155, 170
- Germany, 239, 240, 246
- ghost acreage, 201
- Great Leap Forward, 242–245
- Greer, Charles, 244
- Guangwu, 35, 52, 67, 201
- guerillas, Communist, 116, 125, 220–221, 224, 237, and dike construction, 38, 40, in Henan flooded area, 66, 116, 143, warfare and environment, 117, 237, 241, and smuggling, 72–74
- Guo River, 16, 30, 43, 51, 54, 56, 114
- Guo Chengzhang, 45
- Haizhou, 73
- Han Dynasty, 10, 18–19
- Hankou, 2, 72, 149, 202
- Hansiyang, 52, 138

- He Chengpu, 25
 He Yaozu, 34
 He Zhuguo, 36, 122, 135
 hemp, 48, 100, 159, 164, 202, 203, 208
 Henan, disease in, 63–64, 145, 180–184, famine, 2, 87–90, 93–113, 115–119, 144–149, fuel shortages in, 75–77, 193–195, 206–208, geography and environment, 13–21, 92–93, 166, 242, Great Leap Forward in, 242–245, Japanese occupied areas, 38–40, 43–46, 51, 125–128, land tenure in, 216–219, 227–229, locusts in, 94–95, 213–214, military operations in, 24–27, 53–54, 113–114, 219–227, 237, post-conflict recovery in, 20, 172–173, 191–193, 196–204, 208–216, 230–231, 234–235, 242, refugees, 4, 59–71, 77–81, 85–86, 142–164, 167–174, 204–206, 237, smuggling in, 72–74, soils, 184–190, 232–233, war's ecological impact in, 3, 12, 236, 241, wartime hydraulic engineering in, 32–57, 120–141, 236–237, 238, Yellow River floods in, 1–2, 22–23, 28–32, 41, 56, 90–92, 120–123, 130–141, 175–180
 Henan Disaster Relief Committee, 158
 Henan Repair and Defense Office, 34, 36, 43, 47, 51, 54, 133
 Hershatler, Gail, 143, 245
 Hong River, 124
 Hongze Lake, 30
 households, disaster's effects on, 70, 137, 142, 145–155
 horses, 107–108, 112, 113, 114, 222
 housing, destruction by armies, 74, 194, destruction by floods, 60–61, 64, 70, 91, 122, 136–138, 145, 149, 178, for refugees, 124, 158, 162–163, 165, 174, 179–181, rebuilding of, 150, 199, 206, timbers used as fuel, 75, 137, 194, 207
 Hu Mingying, 130
 Huai River, 1931 floods, 57, and Yellow River, 15–17, 29–30, 56, 173, 231, 235, 245
 Huai River Conservancy Commission, 121
 Huaihai Campaign, 226
 Huaiyang, 4, Communist presence in, 177, 221, floods in, 29, 42, 51, 53, 65, 122, dikes in, 35, 42–43, 51–52, landholdings, 219, locusts in, 94, 213–214, postwar land reclamation in, 212, refugees, 75, 194, UNRRA–CNRRA in, 191, 196, 224
 Huang Yanli, 133
 Huanglongshan, 17, 81–86, 163–170
 Huayin, 158
 Huayankou, dike breach, 26–29, 34–37, 40, 42, 60–61, 77, dike closure, 173, 192, 201–203, 208, 215, 232, and floods during 1950s, 244, sedimentation, 184–187, 233, turnkey project, 245
 Hubei, 88, 109
 hydraulic systems, energy demands of, 7, 12, 18–19, 57, 85, 120, 135, 169, 200, 236–237, labor and materials for, 22, 39–40, 47–55, 78–79, 125–139, 170, 200–203, vulnerability of, 3, 90–94, 122–124, 144, 237, 242, 244, militarized, 22–23, 34–39, 46–47, 56–58, 121, 128–135, 140–141, 245–246, and warfare in global history, 240–242
 Ichigō Offensive, 56, 113–114, 116, 119, 140
 inflation, 96, 102–103, 129
 insecticides, 213–214
 irrigation, 165, 189, 192, 200, 215–216, 245–246
 Japan, control of railroads, 108, environment during World War II, 234, 238, grain expropriation by army, 89–90, 99, 110, 115–116, Ichigō Offensive, 113–114, 116, 140, military competition for energy, 11–12, 23, military invasion of China, 1–3, 17, 19, 23–31, 34–35, 41–42, 51, 53–56, 67, 79–80, 84, 95–97, planting of shelterbelts, 76–77, smuggling, 72–74, 78, and translation of Western terms, 10, wartime hydraulic engineering, 22, 37–40, 43–46, 52, 120, 125–129, 141
 Ji Luhuan, 126
 Jialu River, 16, dikes, 42, 124, 131–132, 135, 140, 237, flooding, 29, 32, 42, 55, 65, 124, 139–140, sedimentation, 56, 178, 184, 186, transport, 16, 73
 Jiang Dingwen, 108, 111, 113
 Jiang Xiuying, 152–153
 Jianguan, 43, 51, 52, 74
 Jiangsu, 2, 30, 31, 73, 121, 182, 184
 Jieshou, 52, 73
 Jin Mancang, 61
 Jin-Pu Railway, 24, 25, 30
 Jingshui, 37, 40, 41, 55, 65
 Kaifeng, dikes in, 35, 37, 43, 44, 45, 65, 73, disease in, 182, floods in, 29, fuel selling in,

- 194–195, 199, Japanese occupation of, 25, 40, 72, 73, sandstorms in, 76, 243
 kala-azar, 182
 Kani Kenhei, 44–45
 Keshan disease, 168–169
 Korea, 175, 240
 Kreike, Emmanuel, 18, 200
- labor, for agricultural production, 89, 91, 97, 111–112, 125, 148, and anthropogenic landscapes, 18, 19, 26, 69, 85, 169, 170–171, 236–237, 241, conscription by military, 98, 99–101, 112, 154, 222–223, 237, as energy/power, 12, 21–22, 59, of females, 142, 154–155, 170, for Huayuankou breach closure, 173, 201, 203, for hydraulic engineering, 21–23, 32–33, 35–37, 39–55, 57–58, 64, 78, 120–141, 151, for land reclamation, 60, 81, 86, 166, 168, 177, 196–199, 208, 210, 212, for locust control, 94, 213, mobilization in Great Leap Forward, 242–243, 245, for post-conflict recovery, 20, 175, 190, 191, 193, 200, 204, 230–231, 233–234, 237, 242, of refugees, 69–71, 75, 80, 83, 144, 147, 150, 154, 156, 160–161, 164–165
- land reclamation, in Gansu, 161, in Henan flooded area, 128, 175, 177, 196–200, 203, 208–214, 223–229, 232, in Huanglongshan, 60, 82–85, 143, 163–169, and wartime economy, 20, 81, 84–85, Zhang Fang and, 80, 158.
- land reform, 221, 223, 227–229
- land tenure, 105, 168, 216–219, 227–229
- Lary, Diana, 31, 89
- Li Hezhi, 147, 148
- Li, Lillian, 19, 88
- Li Peiji, 91, 125, 135
- Liansi, 208, 218, 222
- Liu Dongmin, 152–153
- Liu Huan, 150–151
- livestock, as energy source, 9, 11, 97, 172, 203, destruction in floods, 2, 33, 61, 65, 71, 137, for land reclamation, 82, 83, 196, 208–210, loss during famine, 112–113, 137, 148, requisitioning of, 97, 98, 100, 101, 112, 136, 139, sale to meet tax quotas, 105, shortages of, 78, 109, 111, 138, 178, 185, 191–193, 200
- locusts, and Henan famine, 90, 94–95, 111, 115, 118, 143, in Henan flooded area, 136–139, 149, 213–214
- Long-Hai Railway, destruction of, 72, 79, 96, and geography of Henan, 16–17, and grain transport difficulties, 96, 108, refugee migration along, 79, 83, 157, 158, 181, strategic importance of, 16, 24–25, 35, 28, 113
- Walter C. Lowdermilk, 166
- Lower Yangzi, 23
- Lu Bingyin, 48
- Lu-Su-Wan-Yu Border Area
 Headquarters, 36
- Luohe, floods in, 121, 122, prices in, 103, refugees, 62, 144, 149, 205
- Luoyang, grain prices in, 103, 104, refugees, 79, 80, 150, 156, and smuggling, 73, strategic significance of, 73, 113
- Lushan, 74, 75, 144, 152–153
- Lütan, 72, 132, 134, 197
- Luyi, 4, 51, 62, 78, 127
- macroparasitism, 118–119, 140, 180, 222
- malaria, 63, 179, 183–184
- malfeseance, in dike repairs, 78, 127, 129, 133, 139, in tax collection, 97, 101
- Malthus, Thomas, 170
- Manchuria, 1, 126, 238
- Mao Guangde, 79–80
- Mao Zedong, 20, 242, 244–245, 246
- Marco Polo Bridge Incident, 1, 23
- Marks, Robert, 18
- Marshall, George C., 202
- McNeill, J.R., 11, 234
- McNeill, William, 118, 180
- Mekong River, 240–241
- metabolism, concept of 4–7, 95, 243, human, 120, 142, 175, of militaries, 7–9, 59, 89–90, 116, 236–237
- Mi County, 74, 113, 129, 136
- militaries, and energy, 4–13, 17–20, 89–90, 236–237
- militarization, and environment, 3, 5–9, 17, 246, of hydraulic systems, 34, 57–58, 120–121, 125, 140–141, 203, 237, 245, of Yellow River, 36, 220, 240, 242
- Military Affairs Commission, 34, 43, 51, 54, 135
- Miller, Ian J., 238
- Ministry of Economics, 83
- missionaries, 105, 111, 112, 147, 155, relief work by, 62, 93, 109, 110, 158
- Mississippi River, 239
- mules, 108, 112–113, 148

Cambridge University Press

978-1-107-07156-8 - The Ecology of War in China: Henan Province, the Yellow River, and Beyond, 1938–1950

Micah S. Muscolino

Index

[More information](#)

290

Index

- muscle power, 10–11, 85, 124, 203, 208, 212, 238, scarcity of, 109, 112, 192
- Muslim Rebellion, 82
- mutual-security units, and conscription, 39, 47, 70, 149, 151, and dike repairs, 48–49, and land ownership claims, 217, livestock protection by, 125, and refugee relief, 63, 152, 162, tax collection by, 100–101, 143, 162, 222
- Nanjing, 1, 23, 24
- Nanyang, 41, 103
- People's Political Council, 98, 129
- National Relief Commission, 83
- Nationalist government, and breaking of Yellow River dikes, 1–2, 17, 22–28, 31–32, 56–60, Civil War against Communists, 3, 177–178, 180–184, 202–204, 219–221, 224–226, 238–239, conflict with Japan, 1, 23–24, 113–114, famine relief, 106–107, 108, 110–112, 158, 162–163, flood relief, 62–63, 77–79, grain taxes and compulsory purchases, 95–99, 106–107, 118, 143, 221–222, and inflation, 96, 102–103, military conscription, 70, 99–100, 222–223, and post-conflict recovery, 173, 175, 196, 202, 216, refugee resettlement by, 60, 80–84, 86, 163–167, responsibility for Henan famine, 88–90, 119, scorched-earth tactics, 31–32, in southwest China, 238, wartime hydraulic engineering, 34–37, 41–43, 46–56, 65, 78, 120–123, 128–141
- Nationalist Party, 46, 158, 218, Long-Hai Railway branch, 145, 157, Xihua branch, 128–129
- native-place associations, 160
- New Yellow River Dike Repair Commission, 39
- nitrogen, 82, 190
- North China Plain, as advanced organic economy, 11, 16, anthropogenic environments, 236, and disasters, 59, environmental degradation, 18–19, 86, 231, geography of, 17, locusts, 94, migration, 68
- Northern Henan Border Region, 221
- nutrition, 63, 107, 145, 160, 167–169, 181–182
- Ó Gráda, Cormac, 87, 243
- Operation Chastise, 240
- oxen, 97, 112–113, 148, 190
- Peck, Graham, 155
- People's Republic of China, 227–233, 238, 242–245
- Perdue, Peter, 118, 244
- Perry, Elizabeth, 119
- Ping-Han Railway, destruction of 72, 96, and disease, 181, and geography of Henan, 16, and grain transport, 96, 108, strategic importance of, 16, 24–25
- Pingxin, 100
- population, affected by floods, 66, of Communist-held territories, 177, and environment, 13, 18, 77, 170–171, of Henan refugees in Shaanxi, 79, 157, 161, 173–174, in Huanglongshan, 167, 169, loss due to famine, 87, 112, 137, 144, 156, loss due to floods, 31, 138, 144, recovery of, 230–231, of refugees from Henan, 4, 31, 157, sample from flooded area, 153–154, wartime loss of, 18–19, 173–174, 237
- position-power (*shi*), 12
- power (*li*), 9–12, 21–22
- Poxie, 35, 55, 72–74, 138–139
- predation, 118–119, 180
- provisional levies, 78–79, 97–98, 139, 152
- Qi County, 38, 43, 44
- Qiao Guanghou, 32–33
- Qing Dynasty, 10, 57, 67, 81–82, 84, 118, 168
- Qinghai-Tibetan Plateau, 21
- Qu Chuanhe, 125
- rabbits, 66, 177
- railroads, construction in Henan, 16, 17, 72, destruction, 30, 53, 58, 79, 96, 108, and disease, 181, needed for relief, 109, 205, 224; and refugee migration, 79, 83, 157–158, 204, strategic importance of, 2, 16–17, 24–28, 35, 40, 56, 113, 226
- reconstruction and recovery, of agricultural landscapes, 20, 172, 203, 208, 210–213, 227, 229–231, 233–234, 244, Communist role in, 197–199, 223–224, energy subsidies for, 172, 175, 201, 234, 237, 242, labor required for, 112, 174–175, 199–200, 204, 212, loss of energy for, 19, 57–59, 169, 180, 222, 236, obstacles to, 177, 191–193, 200, 224, 246, UNRRA-CNRRRA role in, 172–173, 196, 200, 201–206, 208–216, 220, 242
- refugees, and disease, 180–184, and environment, 7, 60, 85–86, 143, 169–171,

Cambridge University Press

978-1-107-07156-8 - The Ecology of War in China: Henan Province, the Yellow River, and Beyond, 1938–1950

Micah S. Muscolino

Index

[More information](#)

Index

291

- 237, famine, 143–147, 151–152, 155, in Henan, 4, 31, migration to Shaanxi, 7, 79, 143, 155–163, 174, resettlement and land reclamation, 20, 60, 80–85, 86–87, 143, 163–169, return of, 173–174, 180, 194–197, 199, 204–210, 212, 215, 223, 242, survival strategies, 59–60, 68–78, 85, 142, Yellow River flood, 31, 60–68, 90–91, 149–150, 152–154
- relapsing fever, 145, 181
- relief, famine, 88, 105–113, 118, flood, 33, 57–58, 61–63, 77, 86, 127, 138, in Japanese occupied territories, 45–46, 127, and land reclamation, 80–81, 83, 86, 163–169, in Shaanxi, 79, 80, 158–163, from UNRRA–CNRRA, 172–173, 195, 203–206, 215–216, 222, 224–225, in wartime China, 158, work projects as, 35, 43–44, 47, 52, 80, 121, 151, 196, 212, 216
- Republican period, 19, 68
- River East Independent Regiment, 38, 115
- Rongcun, 121–124, 135–139
- Rogaski, Ruth, 2
- Russell, Edmund, 7–8, 88
- salinization, due to floods, 15, 186, 189, 229, 242, 244, 245, and salt production, 74–75, 78, 189
- sand, deposited by Yellow River, 15, 138, 173, 244, and soils in Henan flooded area, 184–190, 211, 216, 229, 232–233, storms, 15, 76, 179, 186–187, 209, 233, 243
- Schoppa, Keith, 31
- sedimentation, buries farmland, 64–65, 71, 90, 138, 178–179, 207, covers irrigation channels and wells, 192, 215–216, and deforestation, 19, 165, due to wartime floods, 30–31, on Henan plain, 14–15, 16, and hydraulic systems, 23, 57, and post-1949 hydraulic instability, 231, 235, 245, and soils in flooded area, 184–190, 200, 209, 232–233, 235, and Yellow River's wartime shifts, 37–38, 42, 51, 55–56, 120–122, 131–132, 175, 184
- seed, during famine, 105, 110, shortages of, 65, 78, 191, 193–195, 200, loans by Communists, 197, 199, 224, 229, loans in Huanglongshan, 72, from UNRRA–CNRRA, 191, 199, 204, 213, 215, 224
- Service, John S., 98, 110
- Sha River, 16, 42, and Yellow River floods, 29, 51–53, 65, 124, 131, 139, dikes, 42–43, 51, 53, 135, 140, sedimentation, 56, 184, 186, transport, 72, 73
- Shaan-Gan-Ning Border Area, 84, 162, 166
- Shaanxi, geography and environment of, 14, 17, land reclamation in, 80–86, 143, 163–171, refugee migration to, 60, 79–80, 143–147, 150, 155–163, 173–174, 204, 237, relief grain shipments from, 88, 108–110
- Shaanxi Provincial Relief Commission, 162
- Shandong, 15, 26, 121, 202
- Shangcai, 100
- Shanghai, 23, 74
- Shangshui, 35, 191, 214
- Shanxi, 3, 14, 17
- Shao Heniu, 75, 80
- Shaying River, 16
- Shenqiu, 35, 65
- Sherman, William Tecumseh, 239
- Shi Andong, 47
- Shilipu, 46, 47
- Shuangji River, 16, 189, 227, dikes, 33, 135, 136, 140, and Yellow River floods, 46, 65, 124, 140, sedimentation, 56, 124
- Shuipoji, 74
- Shuo wen jie zi*, 10, 12
- silt, see sedimentation
- Sino-Japanese War (1937–1945), background of, 1, 27, Communists during, 90, 177, environmental impact of, 3, 19, 82, 86, 172, 231, 236, 245–246, and energy, 9, and Henan refugees, 79, 153, Henan's role in, 17, 56, loss of draft animals in, 191, and military grain, 98, scorched-earth tactics, 31, and Yellow River, 22, 69–60, 141
- smallpox, 182
- smuggling, 60, 72–74, 78, 92
- soil, in Henan, 15, 77, in Huanglongshan, 71–72, 143, 164–170, postwar conditions in flooded area, 184–190, 209, 216, 230–233, saline, 75, 78, 184
- somatic energy regime, 11, 238
- Song Dynasty, 15, 19, 63, 68, 74
- Special Are Administrative Supervisors, 36, 53, 130, in Shaanxi, 163–164, in Zhengzhou, 47, 60
- Su-Lu-Yu-Wan Border Area General Command, 121
- Suiping, 152
- Taierzhuang, 24
- Taikang: 4, 221, Communist bases in, 115–116, 177, dikes, 37–39, 43–44, 54, 64,

Cambridge University Press

978-1-107-07156-8 - The Ecology of War in China: Henan Province, the Yellow River, and Beyond, 1938–1950

Micah S. Muscolino

Index

[More information](#)

292

Index

- 126–127, floods, 31, 42–43, 45, 51, 78, 122, 178, military activities in, 27, 41, 73, reconstruction, 210, 212, refugees, 62, 65, 194
- Taiping Rebellion, 239
- Tang Enbo, 73, 101, 113, 121, 133, 135
- Tao Lüidun, 47
- taxes, collection in kind, 95–99, exemption for refugees, 83, and famine, 88, 93, 101–102, 105–107, 137, 143, and hydraulic engineering costs, 134, 139, levied during Civil War, 221–223, reduced by Communists, 199, 224, 227
- Thaxton, Ralph, 245
- thermodynamics, 6–7
- Third Group Army, 41, 54
- Thomas, Julia Adeney, 175
- Tianjin, 23, 24, 73
- Todd, O.J., 173, 187, 212
- Toksan Dam, 240
- Tongbai Mountains, 15–16
- Tongxu, 38, 39, 43, 44, 126, 223
- tools, loans by Communists, 224, 229, lost during war, 71, 105, 169, 174, shortages of, 65, 168, 193–194, 200, 208–209, UNRRA–CNRRA distribution of, 194, 215
- tractors, 196, 208, 211–212, 215, 217–218, 225–227, 229
- trees, cut during World War II, 238, damaged in Henan famine, 147–148, 156, 178, for dike repairs, 32, 44, 55, 75, as fuel, 76, 98, 194–195, 207, and land reclamation, 81–82, 86, 163, 165, scarcity in flooded area, 235, scarcity in Shaanxi, 159, shelterbelts, 188, 216, 233, to strengthen dikes, 129, 132–133
- trophic pyramids, 7–8
- Truman, Harry, 202
- Tsutsui, William, 234
- Tucker, Richard, 88, 238
- typhus, 63, 160, 181
- United States, 34, 201, 202, 239, 240
- United Nations Relief and Rehabilitation Administration (UNRRA), in China, 172–173, and flooded area's reconstruction, 173, 180, 190–193, 200, 203–204, 212–216, 233–235, 242, health and medical work, 182–184, and Huayuankou breach closure, 173, 201–203, refugee assistance from, 195, 205–206, 207, 215, relations with Communists, 220–221, 224–226, 229, tractor teams, 196, 208, 211–212, 218, 225, 226–227, 229–230
- van de Ven, Hans, 90, 246
- Vicksburg, 239
- Viet Minh, 240–241
- Vietnam, 240–241
- Brett Walker, Brett, 88
- Wampler, Ernest, 110
- Wang Heting, 131–133
- Wang Ruiying, 150–152
- Wangpan, 41, 43, 51, 54, 122
- war and the environment, conceptualization, 4–9, 12–13, 18–20, 236–237, 247, and famine, 87–89, 117–119, historiography of, 2–3, in modern world, 234, 237–242
- wastes, 5, 7, 63, 179, 236, 237
- wasteland, and domesticated environments, 18, in flooded area, 66, 78, 136–137, 192, 211–214, 227–228, 232, in Huanglongshan, 82–86, 143, 163–166, 169, 171
- Water Conservancy Commission, 131, 133
- Wei Lihuang, 54
- Wei River, 13, 17, 29, 81
- Weichuan, 46, 136
- Weishi, 4, Communist presence in, 177, 197, death and displacement rate, 31, dikes in, 35, 52, 121–122, 125, floods in, 29, 46, 51, 55, 65, 77, 122, 132, 136, 175–176, hydraulic engineering demands in, 47–50, 124, 134, 136–137, 139–140, locusts, 94, 137, military operations in, 27, 221, postwar reconstruction in, 191, 196, refugees, 61–62, 64, 71, 145–147, 150–152, 160, sedimentation and soils in, 178, 184, 186–187, 189, 233, smuggling in, 74
- Weishi Section Emergency Closure Provisional Project Commission, 48
- Westad, Odd Arne, 223
- White, Richard, 21–22
- White, Theodore, 88, 105
- wildlife, see animals
- women, and agricultural labor, 69, 143, 154–155, 170, 219, 246, in flooded area, 54, 64, 78, 153–154, 155, fuel gathering by, 142–143, 194, 207, refugees, 70–71, 142–143, 145–147, 149–152, 169–170, 205, salt smuggling by, 74–75, 78
- wood, cutting in Huanglongshan, 85, 165–166, for dike repairs, 48–49, 55, 136–137, 203, for military, 67, 97, 100,

Cambridge University Press

978-1-107-07156-8 - The Ecology of War in China: Henan Province, the Yellow River, and Beyond, 1938–1950

Micah S. Muscolino

Index

[More information](#)

Index

293

- 102, 194, refugee selling of, 75–76, 131, 149, 165, 194–195, for shelter, 159, 206
work, see labor
Wou, Odoric, 16, 89, 99, 116, 197
World War I, 238–239
World War II, aluminum commodity chains in, 8–9, and energy, 11, 48, 236–237, and environment in Henan, 2–5, 19–20, 85, 140, 169, 172, environmental legacy in PRC, 245–246, and global environment, 237–240, and Japan's environment, 234, 238, and Yellow River, 22–23, 238.
see also Sino-Japanese War (1937–1945)
work relief, and dikes, 35, 43–44, 47, 52, 121, 182, and UNRRA-CNRRRA, 196, 201, 203, 205, 212, 216
Wuhan, 24–27
- Xi Chengfan, 232–233
Xi'an, refugees in, 17, 79–80, 150, 156–162, 174, 204, and smuggling, 73, in Sino-Japanese War, 41, 84
Xiangcheng, 35, 65
Xianyang, 79–80
Xiaoyaozhen, 135
Xihua, 4, Communists in, 177, 221, 224, 228, dikes in, 35, 52, disease in, 63, 182, displacement rate, 31, floods in, 29, 65, 122, 124, 138–139, 175–176, 212, famine in, 138–139, fuel shortages in, 206, household survey, 153, landholdings in, 219, locusts, 94, 213–214, postwar landscape, 178–179, postwar reconstruction in, 196, 208, 210, 212, 216, recovery of agriculture in, 230–231, refugees, 70–72, 144, 150, 152, 160, sedimentation and soils in, 178, 184–185, 189, 211, 232–233, seed loans in, 191, shortage of building materials in, 207, wartime hydraulic engineering demands in, 128–133, 136, 139, and Yellow River Flooded Area Farm, 229
Xing Youjie, 38–40, 44–45, 125–127
Xinjiang, 118
Xinxiang, 40
Xinzheng, 74, 113, 136
Xiong Xianyu, 27
Xu Fuling, 36, 50, 55
Xu Guangdao, 71
Xuchang, disease in, 145, floods, 122, fuel shipments from, 206–207, prices in, 103, refugees in, 62, 64–65, 150, 194–195, 204–205, smuggling, 73
Xunmukou, 51
Xuzhou, 24–27, 43, 72, 226
- Yan'an, 84, 204
Yang Jisheng, 245
Yang Yifeng, 47.
Yangzi River, 23, 27, 57, 72, 106
Yanling, 4, dikes in, 71, disease in, 145, famine in, 112, 137–138, 144, floods in, 46, 64, 65, 122, 124, 137, 138–139, 140, locusts, 94, military operations in, 27, postwar recovery in, 191, 230, refugees, 64, 74, 75, 155, 160, 161, 194, wartime hydraulic engineering burden, 48–50, 125, 136, 139–140
Yellow River, as actor in World War II, 4, 5, 22, 141, in Chinese Civil War, 219–220, 235, course changes, 15, 16, dikes broken in 1938, 1–3, 17, 22, 25–29, 31–32, 56–58, 60, energy of, 12, 21–22, as environmental infrastructure, 23, flooded territory in Henan, 4, 174–177, floods in 1950s, 244, in Great Leap Forward, 245, and Henan's geography and environment, 13–17, and Huai River, 15–16, hydraulic systems, 23, 57, and locusts, 94, and militarized hydraulic engineering, 34–58, 65, 120–136, 139–142, 151, 238, 241–242, re-diversion of, 172–173, 201–204, 215, 233, and salinization, 74, seasonal floods, 14, sedimentation, 14, 15, 19, 56, 71, 178, 184–190, 209, 216, 231–235, and smuggling, 72–73, strategic diversions in imperial China, 22, wartime flooding of, 29–33, 55–56, 61–62, 65–66, 77–78, 90–92, 122–124, 136–141, 144–145, 149–150, 173–174
Yellow River Conservancy Commission, 32–37, 41–43, 47–53, 77, 121, 128, 131–135, 173
Yellow River Disaster Relief Commission, 33
Yellow River Flooded Area Farm, 229–230
Ying River, 16, dikes, 44, 135, 140, floods, 44, 65, 124, 139, 140, post-1949 control of, 227, sedimentation, 44, 178, 216
Yser River, 238–239
Yu Benyi, 126, 128
Yunnan, 184, 220
- Zhang Dingfan, 106
Zhang Fang, 80–81, 158
Zhang Guangsi, 155
Zhang Hanying, 121, 128–129, 133
Zhang Weiya, 130, 133

Cambridge University Press

978-1-107-07156-8 - The Ecology of War in China: Henan Province, the Yellow River, and Beyond, 1938–1950

Micah S. Muscolino

Index

[More information](#)

294

Index

- Zhang Zhizhong, 106
 Zhanyang, 66
 Zhao Xiuchun, 128
 Zhaokou, 26, 27, 29, 40
 Zhaolan, 80
 Zhecheng, 127
 Zhejiang, 158
 Zheng County, 4, dikes in, 35, 37, 76, 136, 201, floods in, 55, 61
 Zhengzhou, disease in, 181–182, grain prices in, 103–104, 221, in Great Leap Forward, 245, during Henan famine, 156, and Huayuankou breach, 17, 26, Japanese occupation of, 53–54, 99, 113, and railroads, 2, 16, refugees, 62, 65, 69–70, 204, sand deposition in, 233, smuggling, 73, strategic importance of, 24–25, 27, 37
 Zhongmu, 4, attempt to break dikes in, 26, dike construction in, 35, 140, disease in, 63–64, dredging in, 54, floods in, 29, 55, 61, 65, 77, 140, military operations in, 27, 53–54, 66–67, postwar reconstruction in, 191, 196, 197, refugees, 31, 71, 79, 194–195, sand deposition in, 185–187, 189, 233, and smuggling, 73, 74
 Zhou Enlai, 227
 Zhoujiakou, in Civil War, 221, 224, dikes in, 42, 43, 51, 135, 140, floods in, 29, 124, 140, inflation in, 103, and postwar reconstruction, 210, refugees, 62, 65, 75, 179–180, 195, sedimentation in, 186, and smuggling, 73
 Zhu Guoheng, 130, 131
 Zhuxianzhen, 43