

The Salt River Indian Reservation: land use conflicts and aspects of socioeconomic change on the outskirts of Metro-Phoenix, Arizona

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Abstract Several North American metropolitan areas including Albuquerque, El Paso and Seattle in the U.S., and the Canadian urban areas of Montreal and Vancouver, are characterized by Indian reservations situated either within or on the outskirts of these cities. This type of Indian reservation or reserve within metropolitan areas has been the subject of limited geographical research, and is nowhere as manifest as in Metro-Phoenix. Three reservations obstruct the otherwise unlimited growth of Arizona's capital. This phenomenon is most striking in the eastern regions of Phoenix where, until the end of the 1980s, the almost exclusively rural, agrarian Salt River Indian Reservation formed a physical and cultural barrier to urban development, preventing metropolitan sprawl beyond a clearly marked boundary. Continued urban pressures have led to changing land uses, effectively hollowing out this embankment or barrier, which has caused a profound change in the reservation. Both the Salt River and Gila River Indian reservations maintain large tracts of irrigated agricultural land, but the transformation that converted farms to suburbs off the reservation is now changing the reservation itself. In fact, this change actually began more than a hundred years ago with the Anglo-American colonization of what is today Arizona's central region.

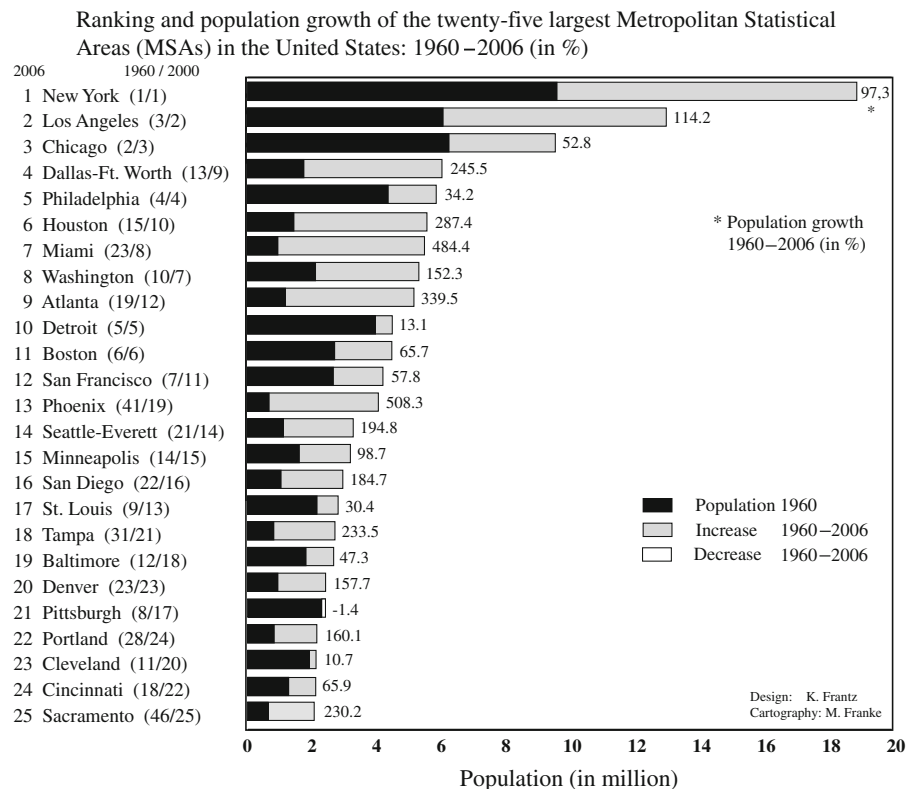
Keywords Indian reservations · Metropolitan areas · Land use conflicts · Socioeconomic change

Introduction

After the Second World War none of today's 25 most populous urban areas in the USA grew as rapidly as Phoenix, the capital of Arizona, and its surrounding suburban cities. With an annual growth rate of 4–10%, the population increased from approximately 150,000 (1950) to about 4.2 million inhabitants (2006) within less than sixty years. This striking growth rate is also reflected in the ranking of U.S. urban areas. By 2006 Phoenix was the 13th largest U.S. metropolitan area, up from 41st place in 1960 (Fig. 1). This growth in the population has gone hand in hand with an equally rapid expansion of its urban land. Metro-Phoenix expanded its urban area more than 39-fold to 4,369 km² in less than sixty years, remarkable even for U.S. cities. Today, urban sprawl is encroaching upon the once remote Indian communities, the Salt River Pima-Maricopa Indian Reservation, the Gila River Pima Indian Reservation, and the Fort McDowell Yavapai Indian Reservation (Fig. 2). This is most impressive in the eastern portion of Metro-Phoenix, where the 213 km² Salt River Indian Reservation with its 3,946 Indians and 2,457 non-Indians [1], is exposed on three sides to the urban and suburban expansion of Phoenix and its satellite cities of Scottsdale, Tempe, Mesa, and Fountain Hills, involving opportunities but

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Fig. 1 Ranking and population growth of the twenty-five largest Metropolitan Statistical Areas (MSAs) in the United States: 1960–2006 (in %)



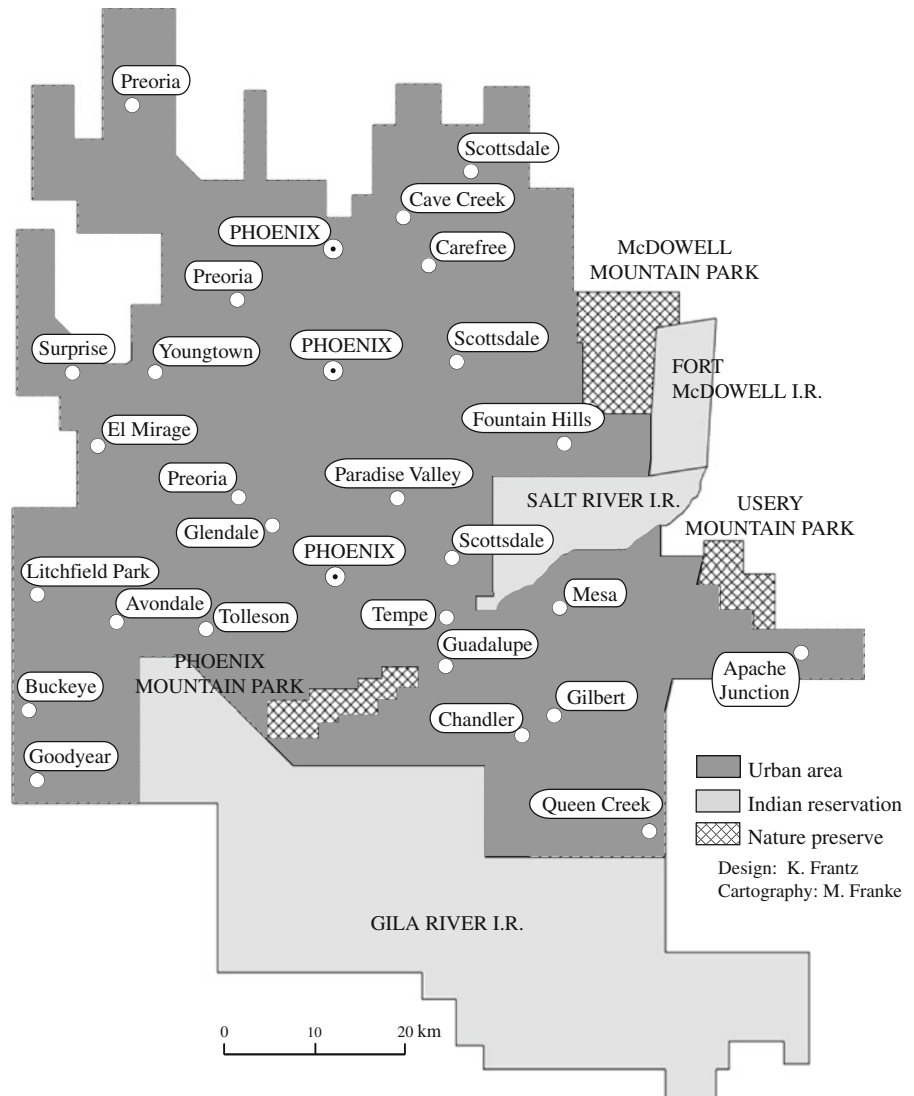
also risks for the Indian population there. Today, this urban sprawl no longer stops at the borders of the reservation. Due to the great shortage of land and water, more and more urban functions are taking place on reservation lands with the help of long-term lease contracts to provide badly needed revenues to the tribe but also to individual and family land owners. The reason why the once razor-sharp boundary between Metro-Phoenix and the reservation (Hofmeister 1980) is becoming blurred, is partly to be found in the specific historical development of the Salt River and Gila River Indian Reservations (Fig. 3).

The change in the Pima-Maricopa society at the time of the Anglo-American colonization

The Pima Indians, who call themselves “Akimel O’odham” or “*People by the River*,” have lived for centuries on the land where the Salt River merges with the Gila River. Their former tribal land also covered the area where later the metropolitan agglomeration of

Phoenix would develop. Concerning their language and their cultural history, the Pima differ fundamentally from the Maricopa Indians with whom they today share the Salt River Indian Reservation as well as the Gila River Indian Reservation. At the beginning of the 19th century the Pima granted asylum to the Yuman-speaking Maricopa, who had to leave their tribal land on the banks of the lower Colorado River to flee from the Mohave Indians. (Hackenberg 1983; Spier 1933). In the Gila valley the Pima and Maricopa took over a widely ramified, complex system of irrigation canals from their predecessors, the Hohokam (“*those who disappeared*”), an earlier agrarian people who lived in the same area until the middle of the 15th century. Thus the Pima and the Maricopa early tribal settlements along the Salt and Gila River were not only able to be self-sufficient, but managed to produce surplus crops. Initial contact with the Spanish and then Mexican immigrants to the region led to positive relations, and the success of irrigated agriculture by the tribes was vital for the first Anglo-American settlers in the middle of the 19th century (Frantz 1999,

Fig. 2 Metro-Phoenix and the adjacent Indian reservations (2008)



Source: Phoenix Metropolitan Street Atlas (2008): Phoenix, Wide World of Maps, Inc.

242f). Therefore, there was little resistance to the establishment of the Gila River Indian Reservation in 1859, extending over an area of 1,500 km².

The Apaches and Yavapai to the north and east controlled large parts of central and south-eastern Arizona, but by the early 1870s they were compelled by the U.S. Army to become sedentary, and with the establishment of a military post at Fort McDowell (Fig. 2), their raiding expeditions in the area came to an abrupt end. Thousands of settlers then began to flock to southern and central Arizona. On the Gila River many non-Indians settled upstream from the Pima and Maricopa villages where they also irrigated and farmed

the land (Ezell 1983). Thus the level of water in the Gila River dropped considerably. Because of lack of irrigation water about 2,000 Pima and Maricopa (Salt River Pima–Maricopa Indian Community Salt River Pima–Maricopa Indian Community 1988, 3; Stout 1872) were compelled to leave their villages and move to a new area 50 km north-east along the Salt River, which at that time was still water-bearing. Against the considerable resistance of the Mormon farmers, who had founded the settlements Mesa and Lehi, a second reservation, the Salt River Indian Reservation, was set up for these Indians in 1879 by the U.S. Government (Comeaux 1991), which was based at Fort McDowell.



Fig. 3 Clear-cut borderline between affluent Scottsdale (part of Metro-Phoenix) and the Salt River Indian Reservation before Pima Freeway was built. Photo: K. Frantz 1994. (*This photograph was originally published in an article by the author and has been reprinted here by permission of the editor of the Geographische Rundschau—Westermann Schulbuchverlag GmbH, Braunschweig*)

In 1911 the first of a chain of dams and reservoirs along the Salt River was constructed by the Bureau of Land Management for the benefit of the newly-arrived Anglo settlers. Thereafter, arable farming in the irrigation oasis of Phoenix intensified, but as a consequence the Salt River dried up. Thus, within one generation, the Pima, the “*People by the River,*” and the Maricopa Indians who had settled there lost a river once again, threatening their existence and identity anew. Because of the lasting change in the ecosystem that the white settlers had brought about, as well as drastic measures in U.S. Indian policies, the Pima-Maricopa society on the Salt River and Gila River Indian Reservations underwent a fundamental transition.

The decline in farming

The Anglo-American settlers who came into contact with the Pima and Maricopa in the middle of the 19th century reported on the extensive fields of maize, beans, pumpkins, melons, cotton and wheat that they saw. The Indians who lived there had already established a long tradition of irrigated agriculture that demanded high levels of political and social organization.

In order to guarantee sufficient food supplies for the troops stationed in Arizona Territory, the U.S. Congress granted farm implements to the Gila River tribal members. This resulted in an extension of the area under cultivation from 1,200 hectares to 7,200 ha (Grossmann 1870, 338) and a significant increase in crop yields. The yearly Gila River reservation production of winter wheat, for example, which had been imported by Spanish missionaries at the end of the 17th century, rose from 120 tons in 1859 to 1,360 tons by 1870 (Hackenberg 1983, 170). However, only one year later the Indian agriculture and the sophisticated canal system on the Gila River Indian Reservation began to deteriorate rapidly when white farmers started to draw water off the river east of the reservation. In 1871 the Indians could therefore only cultivate 1,200 hectares of the land, and at the turn of the century, no crops at all could be harvested (*ibid.*, 175).

A similar scenario occurred on the Salt River Indian Reservation where a few years before an irrigation system had been constructed. When the Roosevelt Dam was completed in 1911, the Pima and Maricopa Indians were suddenly confronted with the fact that they could no longer irrigate their fields with river water and therefore had to rely on food rations from the U.S. Government. Consequently, within only a few decades, many members of this once self-sufficient tribe were reduced to social welfare recipients (Frantz 1999, 243), almost completely dependent on the goodwill of the Bureau of Indian Affairs (BIA) and the missionaries sent to them.

The fragmentation of tribal land

Originally, the Pima and Maricopa owned the land collectively, as was the case for most North American Indians. In practice this meant that each family made

use of a stretch of land for themselves, but this land was only assigned to them by the tribe and so the family did not officially have right of ownership. With the creation of the Salt River and Gila River reservations, which together only made up about one tenth of the original tribal territory (Ezell 1983, 150), the U.S. Government became the trustee of the Indian land, but the land still remained in tribal possession. The decisive turning point for many U.S. Indian reservations came in 1887 when the government passed the *General Allotment Act* (GAA), which had as its goal to subdivide Indian tribal land nationwide and to make the Indians private landowners. According to the bill’s advocates, Indians were to develop an attitude of “healthy egoism” and “intelligent greed” (Gates 1896, 11). In contrast to most other states with

a high percentage of reservation land, the Indian reservations in Arizona successfully resisted this federal policy which drastically interfered with tribal sovereignty. Only 1.3% of all tribal land in Arizona was allotted.

The Gila River and Salt River Indian Reservations, however, were the exceptions to this case in Arizona. Those tribes were dramatically impacted by allotment through the GAA. Although the government officials who had come to survey the Pima and Maricopa lands were met with road blocks resistance against the GAA was only temporarily successful. Between 1905 and 1928 a large percentage of the land of the Gila River Indian Reservation (26.3%) and even more on the Salt River Indian Reservation (48.4%) was allotted (U.S. Dept. of the Interior, Bureau of

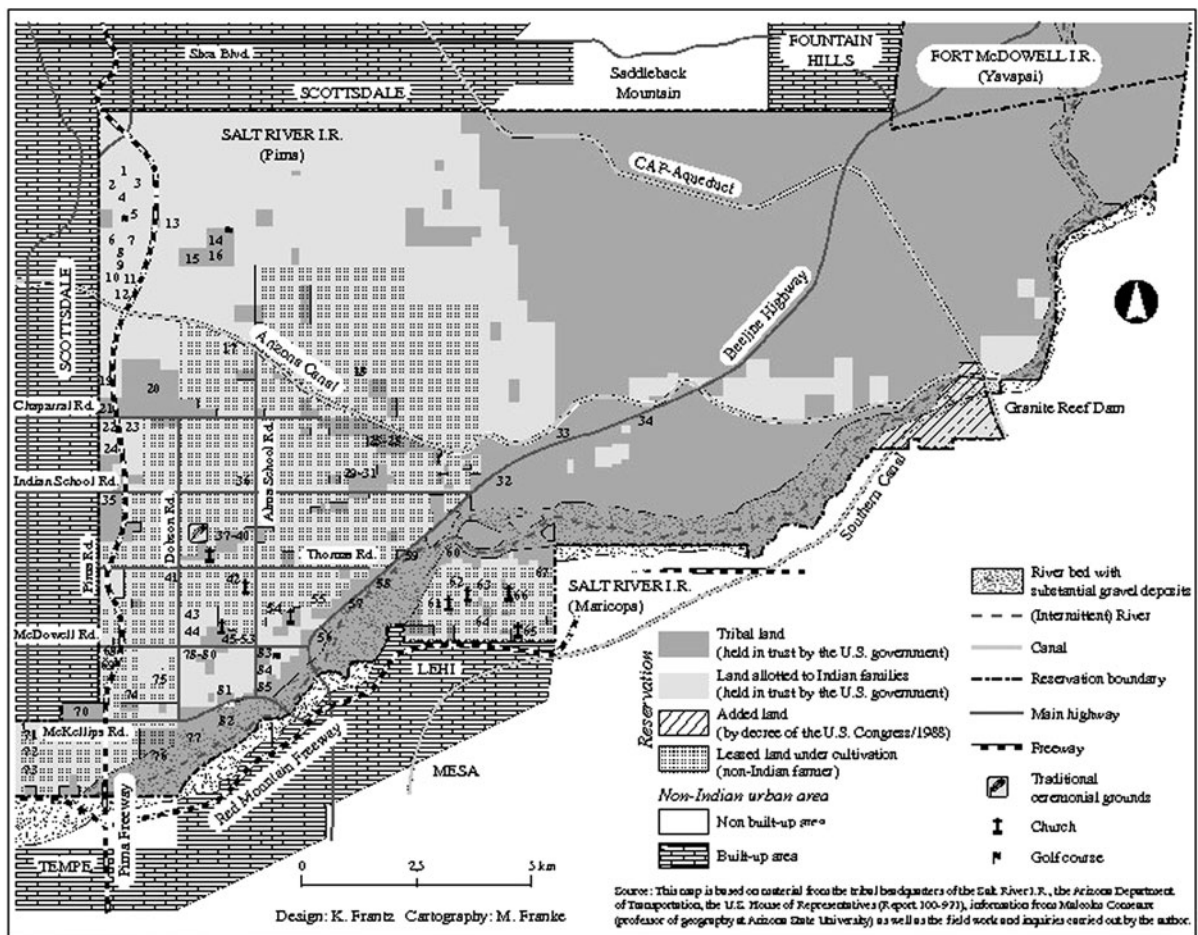


Fig. 4 Land use and distribution of land ownership on the Salt River Indian Reservation (2008)

Indian Affairs 1985, 21). On the Salt River Indian Reservation, for example, 1,374 parcels of land were allocated to tribal members (Presnell 1988, 21). Each tribal member over 18 years of age received 4 hectares of land under irrigation, mainly in areas south of the Arizona Canal, and 8 hectares of barren land north of the canal, which in those days had no access to water (Fig. 4).

Changes in the settlement structure

At the time before the Anglo-American colonization, the Pima and Maricopa Indians settled on both banks of the Gila River in village communities which lay about five to ten kilometers apart (Gregory and McGuire 1980). To help one another cultivate the fields and distribute water fairly it was necessary for

T	= Owned and managed by the tribe	42	Church (Assembly of God) <NI>
TM	= Leased or owned by one member of the tribe	43	Used tires (retailer) <TM>
NI	= Land or facility leased to a non-Indian	44	Security storage (for RVs) <T>
F	= Owned and managed by the federal Government of the U.S.	45	Elementary school (abandoned)
1	Office park (Pima Center II–V) <NI>	46	Water tank <T>
2	Gas station (incl. smoke shop and food mart) <NI>	47	Swimming pool <T>
3	Shopping center (8 shops) <NI>	48	Library <T>
4	Office park (Pima Center I) <NI>	49	Food Distribution Program <T>
5	Golf club (Pavilion Lakes) <NI>	50	BIA-Agency <F>
6	Small amusement park for children (presently closed) <NI>	51	Church (Presbyterian) <NI>
7	Gambling hall for children <NI>	52	Sports ground <T>
8	Cinema center (Cinemax) <NI>	53	Youth center <T>
9	Shopping mall (approx. 140 shops) <NI>	54	Church (Mormon) <NI>
10	Shop selling sport boats <NI>	55	Manufacturing of steel products <NI>
11	Sports facility (batting cage) <NI>	56	Gas station (incl. food mart) <TM>
12	Security storage (for RVs and personal items) <NI>	57	Land fill (abandoned)
13	Office park (Riverwalk Arizona I–IV) <NI>	58	Gravel and cement (Cemex Beeline Plant) <NI>
14	Golf club (Talking Stick) <T>	59	Generating facility <T>
15	Casino (Arizona Casino) <T>	60	Cemetery <T>
16	Hotel (under construction)	61	Church (Catholic) <NI>
17	Compound site for agricultural machinery <NI>	62	Church (Presbyterian) <NI>
18	Compound site for agricultural machinery <NI>	63	Police station <T>
19	Office park (incl. Western International University) <NI>	64	Community center (incl. Head Start, youth center, sport facilities) <T>
20	Scottsdale Community College <NI>	65	Church (Nazarene) <NI>
21	Tribal administration building <T>	66	Church (Baptist) <NI>
22	Gas station (incl. smoke shop and food mart) <TM>	67	Compound site for agricultural machinery <NI>
23	Discount department store (Wal-Mart) <NI>	68	Small amusement park (AZ's Original Scream Park: presently closed) <TM>
24	Fast food restaurant <NI>	69	Rodeo arena <T>
25	High school <public/T>	70	Retirement community (Shadow Mountain Village) <NI>
26	Childhood Early Education Center (= Head Start) <T>	71	Smoke shop and food mart <TM>
27	Education and School Administrative Center <T>	72	Gas station <TM>
28	Elementary school <BIA-Grant School/T>	73	Open air theater (The Scottsdale Six) <NI>
29	Generating facility <NI>	74	Casino (Arizona Casino) <T>
30	Community center (Lonely Cactus) <T>	75	Retirement community (Roadrunner Lake Resort) <NI>
31	Social housing <T>	76	Gravel and cement (Salt River Materials Group) <T>
32	Gravel and cement (Salt River Materials Group) <T>	77	Gravel and cement <NI>
33	Land fill (new) <T>	78	Smoke shop <TM>
34	Sports facility (trap and skeet) <T>	79	Rocks and paving stones for gardens (retailer) <NI>
35	Gas station (incl. smoke shop and food mart) <TM>	80	Tree nursery <NI>
36	Food and vegetable stand <NI+TM>	81	Administration building (Lehi Community Center) <T>
37	Assembly hall (Memorial Hall) <T>	82	Gas fuels (Arizona Propane) <NI>
38	Cemetery <T>	83	Colorful sand for garden design (retailer) <NI>
39	Church (St. Francis Church: Catholic) <NI>	84	Nursery for desert plants <NI>
40	Tribal center (government, parliament, community court etc.) <T>	85	Compound site for official vehicles <T>
41	Compound site for agricultural machinery <NI>		

Fig. 4 continued

the tribes to cooperate closely and to be well-organized. To protect themselves from the ever more frequent Apache attacks after the 1860s aimed at the white settlers as well as the prosperous Pima and Maricopa villages, the Indians built their settlements closer together while their exposed villages north of the Gila River were abandoned (Hackenberg 1983, 169).

The rapid deterioration of arable farming and the canal system, as well as the forced splitting up of tribal land and the acquisition of private land ownership went hand in hand with the decline in the traditional social and political order of the Pima-Maricopa society. Traditional village communities broke down, and following the GAA, a new type of settlement emerged on the Gila and Salt River reservations, a pattern of dispersed settlement which remains characteristic of the settlements in both these reservations today. Besides these dispersed settlements (Fig. 3), there are loosely arranged nuclear settlements, which have developed since the beginning of the 20th century around the BIA agencies, the seats of tribal government and around certain missionary centers. After the 1960s U.S. Department of Housing and Urban Development housing projects on the reservations, created clusters of unrelated residential units in another distinctive pattern.

The effects of these changes today

The declared goal of the GAA was not simply to make Indians private landowners but, above all, to make them farmers. As far as the Pima and the Maricopa were concerned, this policy was unnecessary. In contrast to the majority of the American Indians, the members of both these tribes were already mainly farmers. What is more, their agricultural practices provided a long-standing model for a successful irrigation economy in arid areas.

Approximately one hundred years after the GAA, however, hardly anything is left of this traditional farming community—in large part as a result of the implementation of this legislation on the reservations. On the Gila River Indian Reservation today there are only four families who earn their living from farming [2], either as a secondary or a primary occupation. On the Salt River Indian Reservation, on the other hand, the Indian farming community has completely

disappeared [3]. In spite of this, for the tribal government, arable farming has become one of the greatest sources of income because of the revenues obtained from white farmers who lease land from tribal members and the tribal government (Fig. 4).

Why did this decline in farming occur? Besides taking away the water, which has largely been compensated for through water claims settlements and resultant allocation in the past few decades (Frantz 1998, 223) it has been the subdivision of the tribal land that is most to be blamed for the decline of the farming communities in both reservations. The plots of land that were allotted to the Indians here at the beginning of the century were too small to enable farmers to survive. Very few Indians were aware of inheritance laws or made wills, and as a result, private property allocated to individuals has been divided again and again among the heirs since the GAA came into effect. This has caused the extreme fragmentation of the original properties, which creates great difficulties for many land owners to farm their land. As an example, in the late 1980s the 4 hectares that were originally allotted to one Indian landowner had already been divided up among 88 heirs or shareholders on average. The 8 hectare plots were owned by as many as 289 Indians (Frantz 1998, 223). At the request of the Pima and Maricopa, a partial solution was created in 1982 through the *Land Consolidation Act*. With this act the fragmentation of Indian land ownership was only marginally rectified, but national efforts to resolve the issue continue.

The fragmentation of the Indian land has created many disadvantages for reservation land development, particularly for the Salt River Indian Reservation. There, due to the small size of the land parcels and the large number of heirs for each parcel, approximately 40% of the allotted land cannot be used, including regions north of the Arizona Canal which are not all entitled to any water and have neither electricity nor roads. The only alternative for these small plots is to build a modest home (Fig. 5), which has led to uncontrolled development of reservation land. As a result potential arable land is progressively shrinking and the current tenants are hindered in their farming practices by homes in the middle of fields, while provision of infrastructure improvements including roads, water and sewer to remote home sites are very costly for the tribal government. Individual owners have only a limited



Fig. 5 Modest home of a Pima family on the Salt River Indian Reservation. Photo: K. Frantz 2008

degree of control over their land. They can neither sell nor mortgage their land, and if they lease it, they must obtain permission to do so from the tribal council. Up till recently permission also had to be granted by the BIA.

The procedure regarding leasing is extremely time-consuming, since even if the council grants permission, the landowners must then ask all the heirs of the original allotment if they agree to the leasing. Only if the majority agrees can the lease contract be signed, a problem made worse by the fact that many of the heirs no longer live on the reservation. It often also breeds discord between relatives and frequently leads to a situation that has a crippling effect on any private initiative.

The intention of the GAA, to promote “healthy egoism” and “intelligent greed,” has already borne fruit amongst the Pima and Maricopa. Especially where the reservation borders Scottsdale, and along other major roadways, several landowners have the opportunity to gain high incomes from renting land for urban uses, which has made a small group of Indians quite wealthy. However, this has badly shaken the cohesion of the tribe and resulted in acute social tensions between families and tribal members.

The allotted land has become an Achilles’ heel for the reservation in that the communal land of the tribe has largely remained protected from being snapped up from outside with a few exceptions, but the GAA has managed to weaken (from within and without) those areas in the reservation where private ownership is predominant. Particularly in the area bordering Scottsdale, conflict between self-determination of the

tribe to control its own land and determination from without to lease land has arisen through long-term lease contracts to businesses from outside the reservation. It seems that the tribal government as well as certain Indian landowners are partially losing control over just who owns or controls the land.

Pima Road: the boundary between two different worlds

Nowhere in the USA is the border between an Indian reservation and a metropolitan area as strikingly distinctive as along Pima Road (Fig. 4), whose centerline forms a boundary. In concrete terms, it is a 14 km-long road running from north to south, separating the Salt River Indian Reservation from Scottsdale, Arizona, a city of 240,000 people (2007) and one of the richest municipalities within Metro-Phoenix. Two worlds which have little in common, come together here (Hallock 1987).

This discrepancy becomes most obvious in the landscape. To the west of the road the built-up urban area stretches as far as the eye can see to the west, broken only by a few mountain peaks. To the east is sparsely populated agricultural land, interrupted by plots of empty desert, a mere eight people per square kilometer. In some parts of the reservation border, however, since the end of the 1980s, urban functions have gradually begun to infringe upon the Indian land. In contrast to Scottsdale there is plenty of land on the reservation to be had and the rent is low.

In spite of being within the boundaries of Arizona, the Indian land to the east of the road has been able to retain vestiges of its tribal sovereignty up to the present day. This is manifest in the political system of tribal governments as sovereign nations which fall under federal law, and this is apparent in the jurisdiction as well as the administrative and fiscal operations of tribal affairs. The Salt River Indian Reservation constitutes an independent unity that does not fall under Arizona state powers, but is instead empowered and operates in direct relation to federal powers and law.

In addition to sovereign powers, the tax structures for funding tribal government, and the socioeconomic situation of the residents on either side of Pima Road are completely different. The average per capita income on the Salt River Indian Reservation in 1999

was only 7,680 U.S. dollars, and 32.6% of the families had to manage on an income which was below the poverty level (USBC–American FactFinder 2008a), compared with 4,215 U.S. dollars and 50.5% in 1990 (USBC 1993a). The residents of Scottsdale, in contrast, earned 39,158 U.S. dollars, i.e. about five times more on average, while only 3.4% of the families were considered poor (USBC–American FactFinder 2008b), compared with 23,482 U.S. dollars and 3.5% in 1990 (USBC 1993b). Significant improvement was made for Salt River residents between 1990 and 1999, and this tendency is still continuing today, but the Pima and Maricopa still lag behind the residents of Scottsdale.

There remain considerable disparities in other socioeconomic indicators, including the unemployment rate, the level of education, and whether people own a telephone or a vehicle. Thus, in the year 2000, on the Salt River Indian Reservation (USBC–American FactFinder 2008c and d) the rate of unemployment was more than three times higher than it was in Scottsdale (11.3% versus 3.5%). In addition, 44.1% of the adults in Scottsdale had a bachelor's or a higher degree (USBC–American FactFinder 2008e), while only 0.9% of the Pima and Maricopa Indians who were 25 years and over had graduated from college. This low figure (0.9%) was even 5.1% below the average for all U.S. American Indian reservations (USBC–American FactFinder 2008f). The percentage of bachelor-graduates on the Salt River Indian Reservation actually decreased between 1990 and 2000, when the corresponding figures were 1.4% and 2.5% respectively (USBC 1993a and b).

There are also distinct differences concerning motor vehicle ownership and access. Only 4.9% of the population of Scottsdale did not own a vehicle and 0.4% had no telephone in 2000 (U.S. Dept. of Commerce, Bureau of the Census [=USBC]–American FactFinder 2008g), 14.7% of the Indians on the Salt River Indian Reservation were without a vehicle and 15.8% had no telephone (USBC–American FactFinder 2008h), down from 25.8% and 55.1% in 1990 (USBC 1993c). As there is limited public transportation on the reservation or in Metro-Phoenix, and the distances are considerable, the Pima and Maricopa who do not own a vehicle are at a great disadvantage. This especially applies to those who cannot find a job on the reservation, the elderly and the youth.

Divisions within the tribal community

By living so close to a metropolitan area, for decades the Pima and Maricopa on the Salt River Indian Reservation, more than many other American Indians in Arizona, have been exposed to a great pressure of assimilation and acculturation, from which no one on the reservation could escape. This constant interaction and confrontation with their white neighbors and urban ways of life has brought about a split in the tribal community, causing great tension and creating two political factions, the traditionalists and the progressives.

The traditionalists, who are in the minority and therefore only rarely preside over the tribal council, view with mistrust the values of the Anglo American majority and the progressives who hold many of those values. Many of the values and actions of the tribe are seen by the traditionalists as grave threats to the continuation of tribal society. These include being prepared to lease land to non-Indians on a long-term basis, the fact that many reservation residents are unwilling to share and to help one another out, and individualistic behavior such as the pursuit of education and wealth. They are proponents of a traditional way of life which they describe as “*lasting well-being*” (ká cim áp edag) (Pablo 1983, 212). This would involve having a vegetable garden, participating in religious practices, and sometimes using their native tongue. Less than one quarter of the Pima and Maricopa Indians still master, at least to some extent, their own language (USBC–American FactFinder 2008f); [4]). The traditionalists describe the conformist way of life and the Anglo American civilization as “*lying on top*” (dá m wó okam).

The other political faction is made up of the progressives, many of whom are forced to live between two societies. They are often younger, better-educated and better-off. They work in Metro-Phoenix or have high positions in the tribal administration, and the tribal council chairs have come mostly from this camp. The wealthiest of them are frequently Mormons, who are influenced by the neighboring City of Mesa, with 460,000 inhabitants (2006) the largest Mormon community in Arizona. Many of these families have access to most conveniently situated land, which they often lease to non-Indians, and they are able to earn a very high income from these leases. These funds are generally invested



Fig. 6 Custom-made home of a Pima family on the Salt River Indian Reservation. Photo: K. Frantz 2008

outside the reservation. This money is also used to construct elaborate, custom-made homes on the reservation (Fig. 6). This display of newly acquired wealth is a novelty for most Indian reservations in the Southwest, where egalitarian traditional values discourage such displays of wealth.

Land use and land use conflicts

The simple fact that a sprawling metropolitan area with a population of more than 4 million borders on three sparsely populated Indian reservations renders it likely that land use issues and land use conflicts will become of increasing importance. To put it in concrete figures: there is a total reservation population of about 18,500 [1] with an area of approximately 1,800 km² at their disposal, while 4.2 million people must manage on about 4,400 km². The possibilities for Metro-Phoenix to spread further into the surrounding Maricopa County are extremely limited, however. Only 30% of the County is privately-owned land, the rest belongs to the state of Arizona (11%) and various federal institutions [5] whose land mostly remained protected before the property speculators and irrigation farmers seized it. This means that the shortage of land and rising property prices are becoming more and more of a problem for Metro-Phoenix and Maricopa County, so much so that alternatives must be found.

One alternative is the potential for long-term lease contracts on Indian land, which could partly cover the city's, as well as agriculture's, increasing need for land. For the reservation Indians this would offer

opportunities, but also involve problems. This becomes apparent if one takes the Salt River Indian Reservation as an example.

Agricultural leased land

Most of the leased area on the Salt River Indian Reservation has been claimed for over thirty years by capital-intensive, non-Indian farmers. They had to beat a hasty retreat from the urban sprawl, and moved to the neighboring reservations, where land and water rights were to be had at extremely favorable conditions. Today, 80% of the leased land, approximately 4,300 hectares, are occupied by four large farming enterprises that produce mostly cotton, vegetables and various types of melons [3]. Most of the land belongs to private Indian landowners, who receive a yearly rent of 200–300 U.S. dollars per hectare from the non-Indian leasers. One of the 22 agrarian lease contracts was made with the Maricopa Indians south of the Salt River. For the 320 hectares, the BIA first had to get permission from 979 landowners on behalf of the potential leaser.

In 1988 the state of Arizona adjudicated the Salt River tribal water claims, and granted about 114 million cubic meters more water per year because the tribe had won in a legal dispute, opening an additional 6,800 hectares of irrigated land that could be cultivated north of the Arizona Canal. The Salt River Indian Reservation, together with the Gila River Indian Reservation, would then become the biggest vegetable suppliers in Phoenix. As it turned out, however, this water was not used for farming, because too much land in this area was already developed for residential homes for tribal members.

The reservation as an area of outplacement for commercial and infrastructural amenities for the city

Today, Scottsdale, Paradise Valley and Fountain Hills are among the most attractive and expensive residential areas within Metro-Phoenix. Building land and leased land has, therefore, become very expensive in these communities, and there is not enough land available to meet the demand. That is why quite a few non-Indian businesses and communal facilities

have been set up on the nearby reservation lands (Fig. 4), especially since the end of the 1980s. More and more Indian landowners realize that a good income can be obtained from leasing their land for such enterprises, while for non-Indian enterprises and public administrations the conditions on the reservation are extremely favorable. The rent is low and the tribal government only collects 1.65% sales tax [3] compared to Scottsdale's 7.95% sales tax and additional business taxes amounting to about 5% [6].

Urban development on the Salt River Indian Reservation includes office parks (Fig. 7), a ten-hectare large shopping mall with 140 stores (Fig. 8), tree and desert plant nurseries, a discount department store, various recreational facilities, a college with about 11,000 students (Fig. 9), and even two trailer parks leased to non-Indians. About 1,300 elderly people from Canada and the colder regions of the

USA spend the pleasant, warm winter months in their trailers here. Also, the solid waste disposal site for Scottsdale, Tempe and Mesa was transferred to the reservation several decades ago since none of those municipalities wanted to have it on their territory, and the fact that many environmental restrictions are not valid on the reservation (Frantz 1999, 289f).

Many of these facilities represent substantial investments by non-Indians. For example, the construction costs for the large shopping mall alone totaled over 40 million U.S. dollars. In order to make such investments, the location on the reservation must be secured for the operating company for decades. In this connection it becomes apparent that, with the exception of Scottsdale Community College and the waste disposal site, almost all facilities were built on private Indian land and not on tribal land. As a rule, one can make lease contracts which are valid



Fig. 7 Pima Center office park. Photo: K. Frantz 2008



Fig. 8 Scottsdale Pavilions shopping mall. Photo: K. Frantz 2008



Fig. 9 Pima Freeway with Scottsdale College in the foreground and the non-scheduled bend north of McDowell Road in the background. Photo: K. Frantz 2001

for 99 years and such contracts cannot be readily terminated by the individual Indian landowner. Furthermore, all these facilities are located within commercial corridors along the Pima Road, the Pima Freeway and a few other thoroughfares (Fig. 4). From the point of view of the leaser this is understandable due to the proximity to the urban area. However, the tribal government also promotes these corridors as a kind of buffer from the outside world because they are interested in keeping the core area of the reservation free of Anglo-American influence. The Pima and Maricopa may circulate freely from inside the reservation to these corridors, but visitors only have limited access to the Indian community.

The construction of the urban highway loop through Indian land

The rapid growth of Metro-Phoenix has been paralleled by an even faster rate in travel demand. The expansion of the urban freeway network could not keep up with rapid and expanding growth. Compared with similar-sized urban areas in the U.S., Metro-Phoenix still has the shortest length of freeway mileage per capita today (Johnson 1988, 156f; [7]), which is why the expansion of the urban freeway network has been a high priority.

Originally, a section of the six-lane freeway was to go through Scottsdale. As the land to be used for this section was already built-up, the Arizona Department of Transport (ADOT) had to evict people from 125 homes. At the same time, opposition to this project became so strong that ADOT was forced to look for alternatives. The suggestion was made to place the freeway 400 meters east of Pima Road through the Salt River Indian Reservation. The tribal government and the BIA did not believe this to be feasible. In spite of that, the Department turned to more than 900 individual Indian landowners to negotiate a long-term lease contract for a 233 hectare strip of land, which more or less amounted to selling the land. Numerous public meetings were held and an opinion poll was conducted by the tribe for the landowners concerned. Seventy-five per cent turned out to be in favor of constructing the freeway section. Therefore, in 1990, two and a half years after the beginning of the negotiations, a contract was signed. Opposition to this

contract by tribal members remained strong, and traditionally-minded Indians objected, claiming that land was not a commodity to be sold and that all tribal members should be consulted, though the tribal government refused to do so. What tipped the balance was that the ADOT offered the Salt River Indian Reservation a 233 hectare substitute piece of land at Granite Reef Dam (Fig. 4), as well as a payment of 247 million U.S. dollars, approximately 80% of which went to the Indian landowners. One Pima family, however, refused to accept this offer, which explains the non-scheduled bend in the freeway, bypassing their property, just north of McDowell Road (Figs. 4 and 9), a bend in the “land of straight roads”! Undoubtedly, this freeway, which was completed in the late 1990s, has widened the divide within the tribal community. On the other hand, the Salt River Indian Reservation has had the chance to accelerate economic growth and to create urgently needed additional jobs.

Conclusion

The Pima and Maricopa Indians of Central Arizona once occupied successful villages that relied on irrigated agriculture as the basis of their economies. With the intrusion of Anglo-American settlers and the extension of an Anglo economy based on irrigation, from 1870 onwards the Gila River, the lifeline of these Indians, began to dry up, along with access to Salt River water by the tribes. This resulted in the decline of the agricultural based Indian economies of the Salt River and Gila River Indian Reservations. At the same time, the *General Allotment Act* altered large portions of their land and forced the Indians to become private landowners. This, in turn, led to a break-up of the traditional village communities. Some of these Indians then began to move to the nearby Salt River in order to continue living as farmers on a new reservation. But this river also dried up because of the influence of the white settlers.

Today the Pima and Maricopa of the Salt River Indian Reservation live in scattered settlements. Their former allotments have dwindled to tiny plots of land and the tribal members have given up farming. Since the early 1980s, their small reservation has been in the way of the dynamic growth of Metro-Phoenix, bringing with it opportunities, but also great risks to

tribal culture and cohesion. Many urban functions have begun to encroach upon the reservation, leading to newly acquired wealth for some of the local residents. This wealth has split the tribal society into two political factions, however, the traditional and the progressive. Only the future will show whether this Indian community can withstand the pressure of urban sprawl onto the reservation lands and assimilation.

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