



Cultural Heritage Agency  
Ministry of Education, Culture and Science

# Sawahlunto

*Towards a Sustainable and Attractive Place to Live,  
Work and Recreate*

# Sawahlunto

*Towards a Sustainable and Attractive Place to Live, Work and Recreate*

**Colophon**

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Contact: Jean-Paul Corten  
j.corten@cultureelerfgoed.nl

Authors: Grace Emely, Vince Gebert

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Cultural Heritage Agency of the Netherlands  
P.O. Box 1600  
3800 BP Amersfoort  
The Netherlands  
[www.cultureelerfgoed.nl](http://www.cultureelerfgoed.nl)

# Table of Contents

<b>Preface</b>	<b>5</b>
<b>Foreword</b>	<b>7</b>
<b>Chapter 1. The town of Sawahlunto</b>	<b>9</b>
<b>Chapter 2. Research outline</b>	<b>13</b>
2.1 Problem statement	13
2.2 Tourism	14
2.3 Medical care	14
2.4 Mining	15
2.5 Research design and methods	15
<b>Chapter 3. Present situation</b>	<b>17</b>
3.1 Tourism	17
3.2 Medical care	18
3.3 Mining	19
<b>Chapter 4. Future challenges</b>	<b>21</b>
4.1 Challenges with respect to tourism	21
4.2 Challenges with respect to medical care	25
4.3 Challenges with respect to mining	26
<b>Chapter 5. Conclusion</b>	<b>29</b>
<b>Chapter 6. Recommendations</b>	<b>31</b>
<b>The authors</b>	<b>33</b>
<b>References</b>	<b>34</b>

View on Sawahlunto



The Netherlands share a past with many countries around the globe. The traces left by this past, both within and outside the Netherlands, are referred to as shared heritage. Through its Shared Heritage programme, the Cultural Heritage Agency of the Netherlands (RCE) works towards a sustainable future for (shared) heritage with ten partner countries. Indonesia, evidently, is one of these partner countries.

Within the Shared Heritage Programme the RCE shares expertise, provides training and develops tools. By means of knowledge exchange we aim at a vital future for the cherished heritage in an ever changing society. We work in close collaboration with our partner countries and with Dutch parties within a wide international network. Built environment is one of the three fields covered within the Shared Heritage programme (next to maritime archaeology and museum collections). The RCE focuses on issues that are of social relevance and that are urgent in both the partner countries and the Netherlands. Examples are urban management and water challenges. In doing so, the RCE not only provides partner countries

with up-to-date expertise, but also acquires new knowledge that can be applied back home. Mutual interests are expected to lead to long-term collaboration.

This report presents the results of a study of the development potential of Sawahlunto. The study has been executed by Vince Gebert and Grace Emely, commissioned by the RCE and as part of an ongoing cooperation with the town of Sawahlunto within the Shared Heritage programme. The former mining town and the RCE have a longstanding cooperation, starting in 2004 shortly after the coal mines were closed. The joint cooperation intensified during the process of world heritage listing of Swahlunto's coal mining heritage. I hope this report will be helpful to the local parties in their conservation efforts and that it may provide a base for further cooperation.

**Jean-Paul Corten**

*senior policy officer*

*Cultural Heritage Agency of the Netherlands*

Coal elevator



The town of Sawahlunto was established under Dutch colonial rule following the discovery of an abundance of minable coal in the Sumatran highlands above Padang, in the late the 19<sup>th</sup> century. Once the first buildings and essential facilities had been built in 1887, developments over the next decades led the company town to flourish. However, since the mines' closure in 2002 Sawahlunto's existence base has gradually melted away. The physical remains, however, have remained largely intact. The former mining complex encompasses not only the young town itself but also extraction sites and coal storage facilities, as well as export facilities at the port of Emmahaven, and the railway network linking the mines to coastal facilities.

This report presents the results of a study of potential future prospects for these remains in the former mining town of Sawahlunto. The study was conducted by Grace Emely and Vince Gebert for the Cultural Heritage Agency of the Netherlands (RCE), in close collaboration with involved parties in Indonesia, between 1 and 8 July 2019. The study

assessed the potential for a sustainable and vital town so as to re-create an attractive place to live, work and spend leisure time. On 3 July 2019 various stakeholders in Sawahlunto attended a one-day workshop. While the study was ongoing, the Ombilin Coal Mining Heritage of Sawahlunto was successfully listed as Indonesia's ninth World Heritage Site during the 43<sup>rd</sup> session of the World Heritage Committee, held in Baku on 6 July 2019.

The UNESCO listing was the ultimate result of constant efforts by the late mayor of Sawahlunto, the honourable Amran Nur. As early as in 2004 the newly elected mayor expressed his concerns regarding the town's weak economic position following the termination of mining activities. In response the municipality drafted a new development policy based on heritage conservation and mining-based tourism, which became the city's new vision for the future.

Grace Emely  
Vince Gebert



Railway bridge



The town of Sawahlunto, in the Indonesian province of West Sumatra, is located in a narrow and isolated valley in the mountainous Ombilin region, ca. 90km east of the municipality of Padang. Sawahlunto is surrounded by three administrative territories, Tanah Datar, Solok, and Sijunjung. Initially founded as a company town in which all urban functions revolved around coal extraction, today Sawahlunto covers a total area of 273,45km<sup>2</sup> and has a population of ca. 60,000.

The history of Sawahlunto's coal mining dates back to the late 19<sup>th</sup> century. When in 1868 the interior of West Sumatra proved to contain an almost inexhaustible supply of high-quality coal, the Dutch colonial government set out to extract and process the coal seams in the Ombilin region. These efforts were hampered by the remoteness of the area, and access was further complicated by the high mountain ridges which surround it. To enable exploitation of the coal mines Jacobus Leonardus Cluysenaer (1843-1932), a Delft-educated Dutch civil engineer, devised an integral plan to link the highlands to the port city of Padang, on the west coast of Sumatra, by a railway network. The only feasible method to do this was by means of the newly invented rack railway. From 1887 onwards the railway system, mines, and port were under construction and the first buildings arose, creating the company town of Sawahlunto.

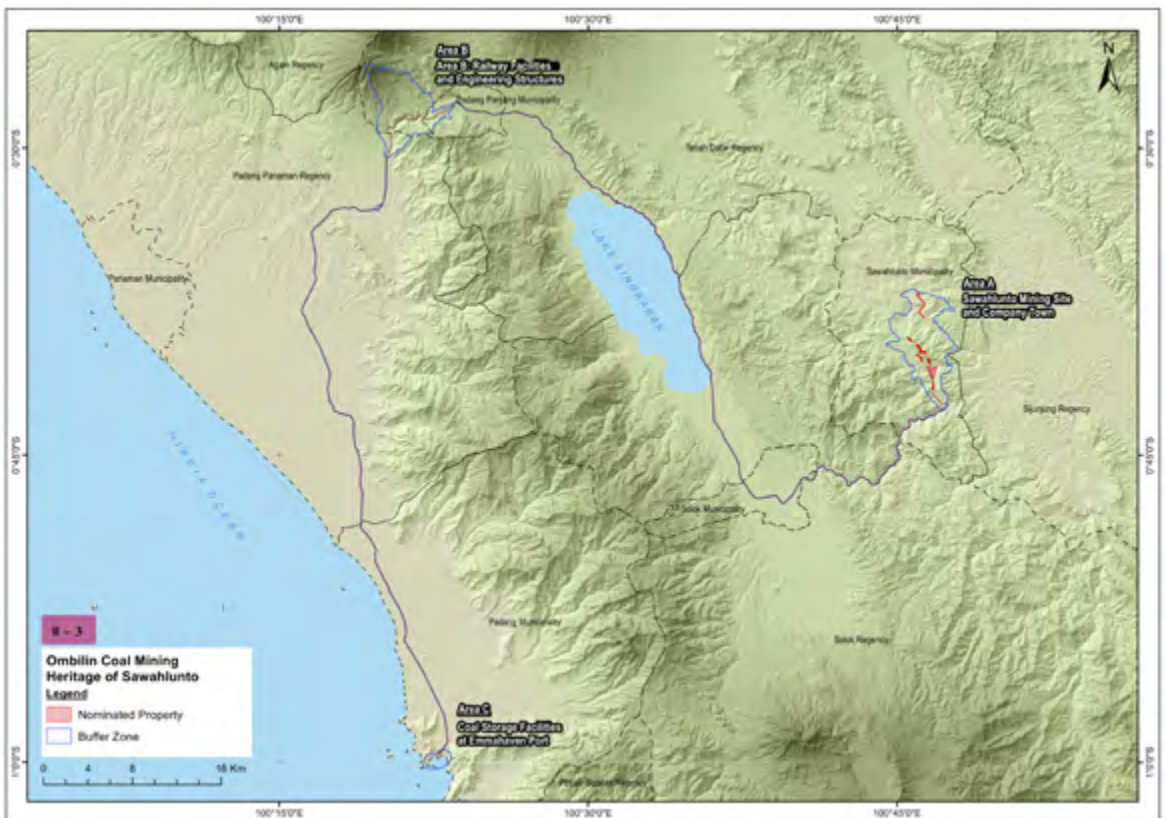
By early 1894, the Ombilin mines near Sawahlunto had become geographically and logistically connected to the coastal facilities at Emmahaven, the port of Padang (today Teluk Bayur seaport) by a railway network that ran via Solok, Padang Panjang and Lubuk Alung. This railway connection was the main route for the transportation of coal from the Ombilin mines to the seaport, from where it was shipped to Tanjung Priok, the port of the city of Batavia, and on to Europe. Cluysenaer's plan was crucial for the mining operations, and the settlement rapidly expanded. Housing was provided for staff and mine employees, as were essential services such as canteens, health care facilities, schools, religious institutions, a sports field, and other recreational facilities including a social club. Newly built central storage facilities near the city were linked to the remote mining pits by a railway track and conveyor belts. Within several decades Sawahlunto developed into a thriving coal-mining centre. The Ombilin coal mining complex represents an innovative system of deep-pit mining, which requires considerable technological knowledge and capital investment. Though the Ombilin coal mines were neither the only nor the first to be operated by the Dutch colonial government, by 1898 they already constituted the largest mining operation and for a long time contributed most of the Netherlands Indies' coal production.



The panorama of Sawahlunto from Bukit Pari (KITLV Collections)



Map of Indonesia, showing the province of West Sumatra (Rizky Fardhyan, 2019)



Map of West Sumatra, showing the listed World Heritage Property (Office of Cultural Affairs, Historical Remains and Museum, 2017)



Transport of coal using at the Loento II Mining Pit (KITLV Collections)

The complex combination of local geological knowledge and the technical expertise of the Dutch engineers (criterion ii), and its status as an outstanding example of a unique technological complex (criterion iv) gained Sawahlunto a successful listing as a World Heritage Site.

Labour conditions in the late 19<sup>th</sup> and early 20<sup>th</sup>-century Sawahlunto colonial mines were quite harsh. The labour force largely consisted of deported convicts known as *orang rantai* (chained people), who were disciplined by a colonial system of institutionalized violence.... This modern form of slavery began in the late 19<sup>th</sup> century with 1,234 miners and expanded to 11,046 workers in 1921, with a small proportion of Javanese and Chinese contract workers. In a report, a local medical doctor ascribed the high mortality rate to the enormous workload due to

rising demand by the colonial power, leaving only seventeen days of rest on a total of 183. Moreover, almost every employee struggled with parasitic mine worm infestations as a result of unhygienic conditions and contaminated drinking water. Added to this were the many injuries, as the colonial administration would not provide dredge boots, and let the workers go barefoot. At the time, Sawahlunto was known as 'Hell on Earth', but these inhuman forms of labour under horrible conditions remained very much underreported (Drieënhuizen, 2019).

Rack-railway running between  
Sawahlunto and Padang



## 2.1 Problem statement

As was stated in the previous chapter, coal mining operations in Sawahlunto lasted for more than a century. At the end of the 20<sup>th</sup> century, profits could no longer keep up with operational costs, and 1999 saw the last coal delivery by train to the port of Padang, before operations officially ceased in 2002. With that, the town's most important source of income fell away. Subsequently the railway network between Sawahlunto and Padang fell into disuse and was shut down the same year. The municipality of Sawahlunto felt the obligation to find an alternative base of existence and devised a policy to sustain Sawahlunto during the following decade. Emphasis was placed on transforming Sawahlunto's economy from mining-based to tourism-based activities so as to create a new economic existence base<sup>1</sup>.

Part of this policy was to have the historic mining town listed as World Heritage to boost its tourist potential. In 2015, the state of Indonesia adopted Sawahlunto's initiative and nominated the historic mining town for a UNESCO listing, acknowledging Sawahlunto as one of the oldest mining towns in Indonesia, in a scenic natural setting and encompassing many historically valuable



Kalam railway tunnel in 2019



Kalam railway tunnel, as part of the Padang-Sawahlunto track, at the time of its construction (KITLV Collections)

<sup>1</sup> For the municipal vision, see Kuswartojo, Tjuk (2001), *Sawahlunto 2020, Agenda mewujudkan Kota Wisata Tambang yang Berbudaya*. Bandung: Pemerintah Kota Sawahlunto-LPM ITB.

buildings. On 6 July 2019 the World Heritage Committee officially designated the Ombilin Coal Mining Heritage of Sawahlunto as a UNESCO World Heritage Site. This listing opens up opportunities to continue urban development, provided a clear vision exists as to the town's future. An exclusive focus on tourism would render it vulnerable (Light 2015: 147). What is needed is a wider perspective on the future that takes into account Sawahlunto's historical features in a sustainable fashion (cf. Winter & Daly 2012: 12-13). In order to achieve this, we look for ways to make Sawahlunto a sustainable and attractive place to live, work and recreate in the future, as formulated in the following research question:

**How can Sawahlunto's historical features accommodate future needs?**

To answer this question, we have identified three potential avenues that might improve the residents' lives, socially as well as economically. These potential avenues will be analysed so as to define their development opportunities and threats, taking into account their physical elements and geographical situation.

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## 2.2 Tourism

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Despite its revenue-generating capacity, heritage-based tourism also has potentially negative aspects such as nuisance and a neglect of other options. An exclusive focus on tourism might put the sustainable continuation of Sawahlunto's historical features at risk, as the town may not be able to cope with a greater influx of tourists. Anticipating such dangers is all the more important in view of the fact that, in general, World Heritage Sites tend to degenerate due to congestion, crowding, and growing tourist numbers (Hall & Piggin 2001: 103). How can Sawahlunto's tourist potential contribute to the 'towns sustainable development?

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## 2.3 Medical care

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During the colonial period, the Sawahlunto hospital was one of the most modern and prestigious in Central Sumatra, providing advanced medical care. Currently known as *Rumah Sakit Umum Daerah (RSUD)*, the hospital



The hospital in 1925 (KITLV Collections)

has lost its former prestigious status. How can medical care help provide a sustainable future for the town?

## 2.4 Mining

The mining school was an important institution that provided the town with a skilled labour force and introduced new European technological expertise in what was then called the Dutch East Indies. At the same time, the college was an innovative hub of experimental engineering, and a place where technological expertise was developed and exchanged between East and West. In the first few years of its existence the college accepted only students from Dutch families, but over the years a lack of interest among Dutch candidates led to the enrolment of so-called ‘Indo’ students of mixed Dutch-Indonesian heritage, as well as a number of Indonesian students. Today, the college is no longer active as it was in the past, and its former premises changed function. However, our initial study revealed there are possibilities for the establishment of a mining polytechnic in Sawahlunto. This report will focus on identifying the strengths and weaknesses of the mining sector so as to understand its future potential. The question is how an institution for mining education might contribute to a sustainable future for Sawahlunto.



The old mining school in 2019

## 2.5 Research design and methods

This report builds on data collected in the course of a desk study and subsequent fieldwork. The initial desk study showed that in addition to heritage-based tourism, the sectors medical care (including the existing hospital, a relic of the colonial period) and mining (including current educational initiatives) should be explored further. The question is whether these sectors are able to provide a vital future for Sawahlunto’s historical features. The desk



Preparation of the workshop, showing research team and local representatives



Welcoming words during the workshop



Stakeholder discussion

study also revealed to what extent different stakeholders are currently initiating development activities in these three sectors. The fieldwork elaborated on the results of the desk study.



Fieldwork was conducted in Sawahlunto and surroundings between 1 and 8 July 2019. Prior to this, basic information was obtained through various government publications, news articles, and national and regional legislation. On site, the town's strengths, weaknesses, opportunities and threats were analysed and its socio-economic possibilities were assessed, taking into account the three identified opportunities. Data were gathered by means of a bottom-up approach in which public, private, and civil participation in a one-day workshop was crucial to understand residents' perspectives on city development. The workshop

consisted of a number of participatory group sessions in which stakeholders engaged in active discussions, expounded on relevant issues, and jointly formulated answers to various questions about potential changes in the social and economic realities. The main goal was to define opportunities and threats for the future of the historical features as provided by the three identified avenues and other alternatives, as stated in Section 2.1. To maximize our data collection, the workshop method was supplemented with in-depth interviews with a total of thirteen local stakeholders, experts and government officials working in Sawahlunto.<sup>2</sup>



Participatory planning session



<sup>2</sup> Transcripts of the interviews can be consulted at the Cultural Heritage Agency (RCE), Amersfoort, The Netherlands.

The next two chapters report on the fieldwork results. Chapter 3 will describe the current situation while Chapter 4 explains future challenges in the light of the mining complex' listing as UNESCO World Heritage.

## 3.1 Tourism

Over the years, the province of West Sumatra has become popular for its *Tour de Singkarak*, an annual international professional bicycle road race. In addition the province is receiving increasing numbers of international religious tourists. With its recent World Heritage Site designation 'Ombilin Coal Mining Heritage of Sawahlunto' the town is now hoping to attract further global attention to the region. This will introduce new future challenges as well as opportunities. The West Sumatra Tourist Office is optimistic that it can promote Sawahlunto as an international destination for sports-minded tourists. In 2014, the provincial body initiated a Regional Regulation Policy that includes a regional master plan for tourism for 2014-2025<sup>3</sup>. This plan outlines steps and goals to develop visitor and tourist facilities, and it entails the preparation of a Sustainable Tourism Strategy which will ensure that development does not negatively affect the World Heritage Site, that local communities will be empowered and benefit from sustainable tourism, and that a visitor management system will be implemented to improve visitors' experiences.

Sawahlunto itself has been actively engaged in developing tourism as its main economic activity since the municipal vision of 2002. The document *Sawahlunto Municipality in Figure 2018* lists three important and successful tourist activities: 1. *Tour de Singkarak*, an annual bicycle road race first held in 2009, which passes through several cities and regencies in West Sumatra including Sawahlunto. It is the most popular event, successfully attracting 302,585 visitors. 2. Opening in 2006, *Waterboom*, an amusement park featuring water recreation facilities, comes second with over 93,446 visitors. 3. In third place, *Taman Satwa Kandi*, a former PTBA coal mining area turned into a recreational park that attracts 89,927 visitors. These three major attractions complement a list of seven local museums and a visitor centre. The most frequented attractions are located in *Lapangan Segitiga* and in the old company town, where we find *Museum Mbah Suro* (the old mining tunnel), *Museum Kereta Api* (railway station)



Lubang Mbah Soero as one of the tourism attractions



The former soup kitchen, now museum (Office of Cultural Affairs, Historical Remains and Museum, 2017)



Museum Goedang Ransoem (Office of Cultural Affairs, Historical Remains and Museum, 2017)

<sup>3</sup> Peraturan Daerah Provinsi Sumatera Barat Nomor 3 Tahun 2014 Tentang Rencana Induk Pembangunan Kepariwisataaan Provinsi Sumatera Barat Tahun 2014 - 2025



Museum Kereta Api Sawahlunto

museum) and the *Museum Goedang Ransoem* (previously a soup kitchen complex). These places mainly focus on local culture and history; they are prime candidates for tourist facility improvement. A newly planned museum, *Museum Orang Rantai*, will tell the history of the convict labourers called *Orang Rantai*, 'chained people'. This museum is due for completion in 2020.

Today, most visitors are domestic, and visitor numbers have greatly increased since 2004. In 2015, 810,000 tourists visited Sawahlunto, a significant increase compared to 2006 (377,220 tourists). A focus on the town's unique historical profile as a cultural and industrial heritage site adds substantial momentum to the building, maintenance and promotion of a local identity (Vargas-Sánchez, 2015). The town has huge potential as it contains over one hundred heritage objects and several abandoned mines with the potential to attract even more visitors. Also, the town's cultural and ethnic diversity is very helpful, as it renders local residents more willing to accept the arrival of more outsiders. To promote its history and cultural heritage, the municipality has set up art galleries, organizes events, distributes information in the form of books and leaflets, and informs the community about the existing museums and their collections. Moreover, in order to deal with the development of the tourist sector, and because it is aware of its potential, the municipality has split its former Department of Tourism and Culture into two different bodies. The new Department of Tourism was

created towards the end of 2016 and became officially operational early in 2017.

### 3.2 Medical care

In 2014, the Indonesian Ministry of Health introduced a new Healthcare Act<sup>4</sup> which compels patients to first consult local clinics before turning to regional hospitals. This stimulated the foundation of a new regional hospital just outside Sawahlunto, leading to a decrease in the number of outside patients coming to Sawahlunto. Despite the new legislation, RSUD Sawahlunto remains a popular hospital to which many turn for a second opinion, because of its long-standing reputation and modern equipment, compared to other regional hospitals.

RSUD's location has advantages and challenges. It is strategically situated at the heart of the city and as such easily accessible for patients. The hospital's good reputation can be substantiated: 16% of its patients came from outside Sawahlunto. RSUD was predicted to contribute 29 billion Rupiah, half the total annual revenue of the region of Sawahlunto. By the end of the year 2018, RSUD alone contributed over 20 billion



Rumah Sakit Umum Daerah (Office of Cultural Affairs, Historical Remains and Museum, 2017)

<sup>4</sup> Peraturan Menteri Kesehatan RI No 28 Tahun 2014 tentang Pedoman Pelaksanaan Program Jaminan Kesehatan Nasional

Rupiah, or 72.1% of the total revenue (Sawahunto Dalam Angka, 2019; Melda, 2019).

Overall, health rates in Sawahlunto are stable, and despite on-going mining activities no unusual diseases or significant health issues exist. At 28.85%, respiratory conditions are the most common health issue in Sawahlunto (Sawahunto Dalam Angka, 2019), a normal figure compared to other regions; most mining activities occur at some distance from the town. Most patients coming to RSUD are either employed at or in another way connected to the mining companies. This is partly due to the fact that employees have annual mandatory check-ups. Only the more serious cases are referred to the larger, provincial hospital in Padang. RSUD also participates in a regional government training programme for medical doctors who wish to pursue further education and specialization, to counteract the existing shortage in human resources. However, after completing their training these doctors often move to other cities.

### 3.3 Mining

From the late 19<sup>th</sup> century onwards the Ombilin mine was the largest coal mining complex in what was then the Dutch East Indies (Erwiza 1999). Despite the presence of abundant coal reserves in Indonesia, mining activity has declined over the years. In Sawahlunto, mining has ceased within the boundaries of the UNESCO World Heritage Site, but outside these boundaries some extraction still occurs. Elsewhere, open pit mining is still practised in places like Bengkulu and Kalimantan. Some 24.21% of Sawahlunto's 128 million ton coal was extracted by open mining (Laporan Rencana Pascatambang PTBA, 2016, p. 36). The rest was left to be extracted by deep mining, which requires future collaboration with private foreign investors. Three companies hold mining concessions in Sawahlunto, of which the state-owned enterprise *PT Bukit Asam (Persero) Tbk. Unit Pertambangan Ombilin* (PTBA UPO) is the largest (ICOMOS 2019: 136). PTBA UPO is the direct successor of the Ombilin Mining Company, which was established during the colonial period.

During the colonial era the Mining College played a significant role in the long-term organization of coal mining (Erwiza 1999). Built in 1916, it provided the necessary labour force and expertise to establish and operate the integrated mining system. It was an important hub for the exchange of technological knowledge. Today, the college no longer exists and its premises have become



Underground mining structure miniature for instruction purposes

a Regional Revenue, Finance and Assets office. Though the building is no longer used for mining-related activities, mining is still taught as a subject at the Soengai Doerian Mining Pit Compound near Sawahlunto. The *Sawah Luwung* Underground Mining Tunnel, which opened in 1980, currently serves as a mining training centre; it resorts under the Indonesian Ministry of Energy and Mineral Resources (*Kementrian Energi dan Sumber Daya Mineral*, or KESDM), and is limited to underground mining activities.



Instruction Coal Mining Tunnel JICA-BDTBT.



BDTBT Training Area

The years 2001 to 2006 saw a successful collaboration between KESDM and the Japan International Cooperation Agency (JICA), resulting in the establishment of the Vocational Training Centre for Underground Mining (*Balai Diklat Tambang Bawah Tanah*, or BDTBT). BDTBT, which resorts directly under KESDM, is an advanced institute for mining expertise and the only underground training centre in Indonesia. Training programmes prepare personnel for future deep mining activities.

During our fieldwork plans existed for an additional Mining Polytechnic in Langkok Village, near Sawahlunto. However, this polytechnic is still at the planning stage. Also at that time, BDTBT announced that the creation of this Polytechnic remains uncertain due to declining interest in the mining industry. To accommodate a future Polytechnic, KESDM made available an 8ha section of the campus in Parambahan (Tanah Datar), 7 to 8km from Sawahlunto, as a vocational training centre, in cooperation with the municipality. The Sawahlunto Polytechnic would then be part of a joint enterprise with other institutions including Jakarta State Polytechnic and Bandung State Polytechnic. Training would focus on technical underground mining and open-pit mining, health and safety-related issues, and mining-related environmental impact assessment. However, while this report was being written, BDTBT announced that plans for the Polytechnic were put on hold.

BDTBT, in cooperation with KESDM and Sawahlunto municipality, has established a national Geopark Sawahlunto in the Ombilin Basin area. This Geopark is intended as a UNESCO Global Geopark (UGG), in line with the recent world heritage nomination. The park aspires to become a destination for mining tourism as well as a geology campus for education in sustainable mining and post-mining activities. In accordance with this, BDTBT has set up an educational programme for the general public, which can receive information on the history of coal mining and development technology in Sawahlunto. BDTBT organizes a rafting heritage trail along the Ombilin river through the World Heritage Site (from Salak Power Plant to Rantih Water Pumping Station).

## 4.1 Challenges with respect to tourism

Though the industrial and manufacturing sector contributes 13.9% to the Gross Regional Domestic Product and Tourism contributes only 1.9%, the latter has undoubtedly become the Sawahlunto administration's main focus for economic development (Sawahlunto Dalam Angka 2018). With all eyes turned to tourism, the more so following the World Heritage Site listing, much work still needs to be done. However, the present condition of the infrastructure as well as human resources pose a significant challenge with respect to development. In West Sumatra, Padang and Bukittinggi are several steps ahead of Sawahlunto in terms of tourism. Padang is the provincial capital and commercial centre, strategically positioned and the gateway to the area; Bukittinggi is an already well-established tourist destination attracting many international and domestic visitors. Both cities are renowned locally and internationally as tourist destinations and both are focal points for the Indonesian Ministry of Tourism. Within this specific part of West Sumatra, Istana Paguruyung is also an important tourist hub and in particular attracts many religious pilgrims.



Map of West Sumatra (Provincial Office for Tourism, Art and Culture)

From a tourist perspective, Sawahlunto is a newcomer in the province and not yet a prime destination. The challenge for Sawahlunto is to keep up with these longer established and well-known tourist destinations.

Geographical location poses another major challenge. Sawahlunto is situated at a high elevation in the interior of Sumatra, relatively far (ca. 90km) from Padang, West Sumatra's central hub where most visitors arrive. Often these tourists travel from there to Bukittinggi and Pagaruyung, passing by Sawahlunto. The long distance is compounded by the fact that the road infrastructure is not yet optimal; a journey from Padang to Sawahlunto can take up to ca. 4.5 hours. Moreover, insufficient marketing and advertising leave visitors unaware of the attractions Sawahlunto has to offer. After the field study, while this report was still in progress, recent developments since the UNESCO listing suggest that Sawahlunto is now part of tourist packages in West Sumatra.

Other challenges concern Sawahlunto's visitor capacity. In view of the UNESCO listing the municipality anticipates around 1.4 million visitors by 2023, both domestic and international, and most of them from Malaysia, Singapore and Brunei. Many of them are pilgrims, often of Minangkabau descent, who are visiting places such as Bukittinggi and other parts of West Sumatra. At present, visitor accommodation capacity is insufficient to cope with this number. Built in 1918, the Ombilin Hotel was the first



The Ombilin Hotel (Office of Cultural Affairs, Historical Remains and Museum, 2017)



Former Engineer House turned into VIP Ombilin Hotel



In view of these limitations the municipality encourages the local community to utilize their private dwellings as homestay. At present, ca. 80 homestay facilities are scattered around the city, especially in the Old Town and Talawi districts. Visitor numbers (ranging from international to local guests) as well as the number of visiting government officials have increased over the years. An umbrella organization in charge of marketing strategies has been initiated to encourage and jointly achieve hotel standards at the homestays. As a result, one of the homestays, Oma Homestay, made it into the top-5 of best homestays in Indonesia.



Besides facing the problem of insufficient accommodation, the town also lacks other amenities that meet adequate to good standards. No restaurants able to provide food of acceptable quality exist, nor is there a place where tourists can sample the traditional local cuisine or merely enjoy the old town. In the evening, street food vendors appear along the river, thus adding to the lively feel of *Pasar Remaja* which extends up to *Lapangan Segitiga*, in front of the PTBA



“Oma Homestay”, one of the successful homestays in Sawahlunto

and only hotel in town, receiving high-ranking guests such as government officials, mining engineers, doctors, and *opzichers*, mining inspectors. By the time of the field study, the hotel was temporarily closed for renovation, leaving only Parai City Garden Hotel, the town’s only three-star hotel with 41 rooms, to cater to tourists. With the exception of plans to convert the old PTBA office into a 120-room hotel whilst keeping its original façade intact, no other plans for future hotel development in the town exist. The municipality has announced that hotel development will be limited, since most potential investors are unwilling to step in due to the currently low visitor levels.



Street food vendors in Sawahlunto at night

administration building. Right now, the various dishes these street food vendors could sell to future local and international tourists are of questionable quality and hygiene. This is a missed opportunity, for an increase in both quality and quantity will tempt tourists to spend more, revenues that will flow into the local economy. Although some people might consider opening a restaurant, a lack of space remains the biggest challenge.

Revitalization programmes for some historic buildings are being drafted. For example, the Great Mosque, originally built as a steam power plant in the Dutch colonial period, is scheduled to be revitalized as a religious tourist attraction. Most assets in and around Sawahlunto pertaining to mining are owned by PTBA. As the owner of a number of assets designated attributes of outstanding universal value, PTBA had been directly involved in the UNESCO nomination process. Though some are still functional or have been given a new purpose, many buildings remain vacant. PTBA is currently working together with a consultant towards the revitalization and re-usage of PTBA assets. For example, PTBA's main office building, which inherited this function from PTBA's Dutch predecessor, the Ombilin Mining Company, is scheduled to be converted into a hotel. PTBA is also evaluating the potential of one of the mining tunnels, Lubang Loento II, to become a tourist attraction.

The coal transportation system with its conveyor belt and the Salak Power Plant, both non-operational for over

sixty years, are currently being assessed with regard to the feasibility of new tourist-related functions and educational purposes. The Indonesian Railway Company (Indonesian *PT Kereta Api Indonesia*, or PT KAI) has initiated a revitalization project involving the railway between Padang and Solok in the context of future tourism along the historical rail track. These projects are still at the planning stage. Their implementation is a major challenge and requires intensive collaboration between stakeholders. Consultations of stakeholders, tour operators and travel agencies from Padang and Bukittinggi are still ongoing. Hopefully, this cooperation and coordination will be able to facilitate the development of tourism to Sawahlunto.

Whilst acknowledging the need and future of Sawahlunto as a tourist destination, the government also realized the importance of developing the town's current enlisted World Heritage properties. At this moment, there are already several museums in and around Sawahlunto and the Municipality's proposal to turn these properties into yet another museum raises questions with regard to its attractiveness in the future. Funding these developments would be very costly, and in view of the limited municipal budget it would be a challenge to find alternative funding resources.

As the 109 listed properties are located in seven districts throughout West Sumatra, presenting them as a complete package will be a massive challenge. Except for



Coal Processing Plant Compound (Area Saringan)



a Heritage Trail brochure and banner available in the old town, at the time this report was being written no package nor any tour operator or community-based tourist office that could market it yet existed.

Furthermore, there are no commercial souvenir shops where tourists might buy mementoes. There is a small local craft shop less than 500m from the entrance of



Coal Handicraft Shop (Rizky Fardhyan, 2019)

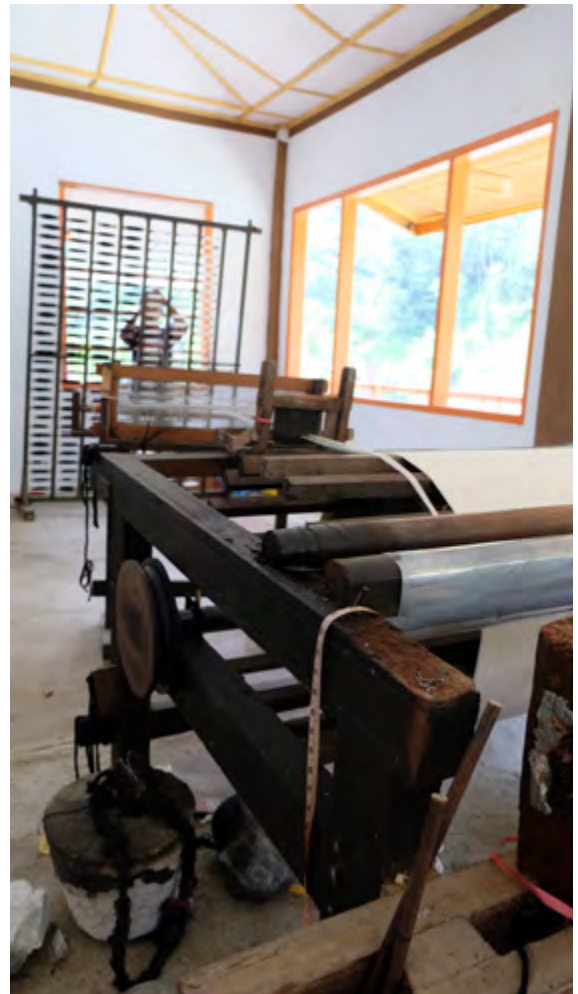
Museum Lubang Mbah Suro, but it does not stand out in the streetscape and only has a few items on display in a glass box in front of the shop. Its invisibility and unattractiveness put tourists off, because they do not recognize the place as a souvenir shop. During our interviews, a local artist who works in coal expressed his reservations about having to transport his objects to a public space, as coal is highly fragile and could be



Songket Silungkang



Coal Craftsman



Weaving Loom

damaged in the process. The artist therefore keeps his merchandise at home and operates from there, rather than selling it at or near other main attractions in the old town, even though fewer visitors will come. Moreover, the government provides no financial support or marketing assistance.

On the other hand, a private Songket (Sumatran traditional fabric) workshop, at a distance of ca. 16km from Sawahlunto, has become popular throughout Indonesia. So far this Songket workshop has been successful in empowering the surrounding local community, especially women, by providing them with jobs. The shop owner provides the local weavers with the materials needed for the Songket, and the weavers return the finished products to the shop owner, who then checks the quality. If the cloth conforms to certain standards the weaver will be paid and the cloth can be sold in the shop. If the quality is poor, the weaver will either have to redo the work or the cloth will be used for other purposes.

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#### 4.2 Challenges with respect to medical care

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The hospital compound is more than a century old but despite its age is still in good condition. Over the years it has made several attempts to advance the quality of its health care and to expand the hospital by means of renovations and other improvements to comply with modern standards.

The old city of Sawahlunto and the hospital itself were built to cater mainly to the mining company's personnel. As the city expanded and its population increased to 61,000 the hospital was no longer able to accommodate all of them. Development and expansion became necessary. Plans for expansion and infrastructural measures to improve access were drafted in 2014 but were put on hold due to financial issues the hospital had with the local government. RSUD's 2014 master plan envisioned the addition of a new building because the old hospital could not comply with modern standards, for example the presence of temperature-controlled rooms to store certain medical instruments. The modernization process also involves replacing the wooden door of the former surgical ward by a glass one, and adding more safety exits.

The hospital is accredited as a Type C hospital, but it requires various permits either to meet modern standards or to receive accreditation as a Type B hospital.

Modernizing or redeveloping the hospital still remains the biggest challenge due to limited expertise in how to meet current standards for modernization whilst simultaneously preserving the 1915 building's heritage character. Expanding the hospital's infrastructure and improving its services without disturbing the historical features is therefore problematic.

Under the 2009 No. 44 Government Act<sup>5</sup>, government hospitals are to be converted into independent Public Service Agencies (*Badan Layanan Umum*, or BLU). This will allow each hospital to become financially flexible whilst maintaining its efficiency, effectiveness and productivity with regard to quality service. A BLU wishing to qualify for a development loan has to submit a number of documents including proof of land ownership. However, the land on which the RSUD and surroundings are located is owned by PTBA, the successor of the colonial Ombilin Mining Company. This ownership issue not only creates a financial problem but, without the consent of PTBA, also renders illegal any plans for future physical expansion. In total, PTBA owns ca. 32.45% of the land in Sawahlunto (Sawahlunto Dalam Angka, 2019).

A recent initiative aims to transform the old building into an administrative office or a central hall while construction of a completely new, modern hospital is ongoing to cope with current demand. However, the hospital's attempts to expand and develop both horizontally and vertically have frequently been thwarted. The geological contours of the terrain make it difficult for the hospital to expand sideways, and the complex itself cannot support more than two levels. Moreover, approval to alter the hospital's physical appearance has not been forthcoming due to its World Heritage status and land ownership issues, and the required permits to pursue further development have not been issued. An alternative proposal would see a completely new hospital in Muara Kalaban while leaving the present complex intact to serve as a specialized unit, thus making physical expansion unnecessary. However, this proposal runs into problems with regard to access, for Muara Kalaban lies several kilometres south of Sawahlunto-centre so that visitors would need some form of transportation.

In addition to these physical challenges the hospital also needs to improve the quality of its service. It has been argued that the hospital is too bureaucratic, causing confusion among patients. There is also a perceived need to increase the number of medical

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<sup>5</sup> Undang-undang Republik Indonesia Nomor 44 Tahun 2009 Tentang Rumah Sakit



Rumah Sakit Umum Daerah Sawahlunto, formerly Ombilin Hospital since 1912

specialists and nursing staff. At the moment, twelve medical specialists are active in Sawahlunto, but it became clear during our interview with hospital management that it is difficult to maintain this number. As a small hospital far from the West Sumatran capital of Padang, Sawahlunto has become less attractive for medical doctors as a place of employment. Many of those receiving government study grants have left the hospital to move to larger cities.

Our study also revealed that an existing community health centre has done quite well in handling general diseases and referring the more serious cases to RSUD. During our workshop the suggestion was raised to develop these community health care centres in order to solve the expansion problem. Quality improvement and physical expansion of the health care centres would increase their patient capacity, which in turn would render expansion of the old hospital premises less urgent. The hospital would thus be able to focus on the

more serious cases: quality enhancement instead of quantity. In that scenario, no substantial modifications to the old hospital building would be required.

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### 4.3 Challenges with respect to mining

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More than 30 million tons of coal have been extracted by open mining, leaving only underground coal deposits, which require deep mining techniques (Laporan Rencana Pascatambang PTBA, 2016). However, deep mining has not been commonly practised in Sawahlunto for the past few years. Huge investments will be needed to develop this method further.

BDTBT is one of Indonesia's most prominent deep-mining colleges. At the moment its training programme does not enrol individual students but largely concentrates on ministry-appointed candidates and groups of trainees from various Indonesian companies. The college also engages in bilateral collaboration with other countries. As the only deep-mining training centre in Indonesia, the number of trainees varies each year depending on market conditions and company requirements. Located ca. 5km from the old town of Sawahlunto, BDTBT has limited dormitory capacity or student facilities. Despite its many successful graduates over the years BDTBT remains an exclusive institution with limited impact on local economic development.

Of course, students and staff purchase what they need on a daily basis at the local market, providing a direct impulse to the local economy. Moreover, in the event dorm capacity is insufficient, additional accommodation is created in collaboration with homestay owners. However, as most homestays are located in and around the old town, commuting is expensive and time consuming. In combination, the successful development of the mining college and insufficient preparation for the stream of tourists are expected to cause significant accommodation shortages.

KESDM is also aiming to establish three different vocational training centres, in Bandung, Jakarta and Sawahlunto. The first two have already materialized; vocational training in Bandung focuses on geology, mining and metallurgy, while the Jakarta training centre concentrates on sustainability. During our interview, Dr. Asep Rohman, the director of BDTBT revealed that plans are in progress for a vocational training centre in Sawahlunto, which will provide training in deep mining.

## Scheme 1. Impact assessment

The scheme shows the impact of the developments as identified in chapter 4 on the local community and economy of Sawahlunto.

	<b>Social impact</b>	<b>Economic impact</b>
<b>Tourism</b>	<b>Positive impact</b> <ul style="list-style-type: none"> <li>The recent World Heritage listing expects an increase in the number of tourists, both domestically and internationally.</li> </ul>	<b>Positive impact</b> <ul style="list-style-type: none"> <li>Tourism opens a new opportunity for local people to open new businesses such as food stalls and homestays.</li> <li>The promise of increasing numbers of tourists can attract investors.</li> </ul>
	<b>Negative impact</b> <ul style="list-style-type: none"> <li>Fast town development can lead to incautious planning that might bring undesired and unintentional changes to the environment and livelihoods of local people.</li> <li>Tourism can lead to overcrowding, and subsequently to deterioration of existing properties.</li> <li>Influences by outside tourists might affect the existing social dynamics of local people.</li> </ul>	<b>Negative impact</b> <ul style="list-style-type: none"> <li>If opportunities are not equally distributed, tourism can be beneficial only to investors and cultural institutions, bypassing the local community to respond to potentials in the informal economy. This can lead to a larger economic gap between lower and upper classes, similar to the case in Borobudur Temple Compound.</li> </ul>
<b>Medical Care</b>	<b>Positive impact</b> <ul style="list-style-type: none"> <li>Shifting focus from development of the hospital to development of the health care centre gives opportunities for the hospital to solely focus on serious illnesses, and so improving its medical care quality.</li> <li>The strategic location of the hospital makes it accessible for the locals.</li> </ul>	<b>Positive impact</b> <ul style="list-style-type: none"> <li>Development of the hospital increases job opportunities. It might attract more specialized personnel.</li> </ul>
	<b>Negative impact</b> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<b>Negative impact</b> <ul style="list-style-type: none"> <li>N/A</li> </ul>
<b>Mining</b>	<b>Positive impact</b> <ul style="list-style-type: none"> <li>Development of the Geopark forms an interesting link between mining education and tourism: for mining students it provides a learning environment and at the same time gives them opportunities to engage with tourists interested in Sawahlunto's mining practices.</li> </ul>	<b>Positive impact</b> <ul style="list-style-type: none"> <li>The success of BDTBT as the main deep mining learning centre in Indonesia will bring an indirect impact on the local economy as students and staff will spend their capital for their daily needs from the town facilities.</li> <li>The Geopark requires more personnel to engage in tourism provision. It gives opportunities to students or other local people to take up tasks and jobs.</li> <li>The Geopark can give an extra boost to tourism development, attracting more visitors to join this park and thus obtaining more local revenues.</li> </ul>
	<b>Negative impact</b> <ul style="list-style-type: none"> <li>The development of BDTBT does not have a direct impact on the local people as this training centre targets a group of people either from the government or from companies.</li> </ul>	<b>Negative impact</b> <ul style="list-style-type: none"> <li>N/A</li> </ul>

Silo Gunung Coal Storage  
in Padang



Since the municipality initiated its strategy to shift development from mining-based to tourism-based activities to create new economic opportunities, and, more recently, following the UNESCO World Heritage designation, the municipality has embarked on a course to find sustainable ways to accommodate future change. Sawahlunto has great potential to grow into a sustainable city and an attractive place to live, work and recreate. This has defined our research question: how can Sawahlunto's historical features accommodate future needs? This report has identified three potential avenues that can be pursued to reach that goal. In addition to tourism our study has also identified opportunities for expansion in the medical and mining sector. We further established that each of these three sectors should be given equal weight, and that a future development plan should address all three rather than focusing exclusively on tourism. This means that a cohesive collaboration between public, private and civic parties is crucial. The local government is best suited to create the conditions for this collaboration.

One of the most important issues to emerge from our study is that of land ownership, which frequently hampers the development process. Most of the land occupied by enlisted heritage is owned by PTBA, a situation which slows down development efforts by RSUD and the municipality. Furthermore, since the colonial period a conflict has existed between the PTBA and the local indigenous population with respect to land ownership. Since the main focus has been on tourism,

land ownership issues seem to have been largely neglected. Addressing them might be conducive to the town's development. Co-ordinated collaboration between all sectors, especially local government, mining and the hospital as the three main actors, is essential to arrive at a workable solution.

An additional policy of improving facilities and living conditions will benefit both local residents and tourists, and will also help to hold on to current medical staff and attract new personnel. By improving Sawahlunto's social and physical attractiveness, doctors are expected to be persuaded to stay after completing their training, thus retaining skilled medical expertise and improving its quality.

A carefully drafted scheme for the handling of listed properties should be part and parcel of this policy. Not all properties should be turned into a museum. Finding an appropriate future function in accordance with the identified potential is an important element of the conservation process and one that will also benefit local communities. There is an urgent need for skilled expertise in the management and conservation of this World Heritage site, for advice on how to minimize the negative impact on heritage structures and to maximize their heritage development potential in relation to mining and medical care. For the 1915 hospital complex in particular, expert knowledge on how to preserve its historical features whilst conforming to modern standards is crucial.

Former head office of the  
Ombilin coal mines in Sawahlunto



So far, this report has demonstrated Sawahlunto's potential to become a heritage-based tourist destination by developing its mining facilities and related activities as well as its health care amenities. This process will have to involve the collaboration of several different stakeholders. We believe the municipality of Sawahlunto could play a part in bringing the stakeholders together to facilitate the formation of a stakeholder framework. The following recommendations concentrate on the role of the municipality and offer suggestions for a follow-up.

### **Creating an institutional framework**

In an Indonesian context the municipality plays an important role during the planning process by drafting strategies and plans and presenting them to the public. However, we believe it to be inadvisable for the municipality to set out and define concrete strategies and plans for the stakeholders. Rather, we suggest that the municipality facilitate an institutional framework in which all stakeholders can communicate, share ideas and create action plans and jointly arrive at solutions. The municipality would provide the context in which the stakeholders can make arrangements together. Whilst avoiding the mistakes of earlier UNESCO-listed sites, where a huge gap existed between the local community and the heritage, Sawahlunto should instead invigorate the entire community as a unity. It is therefore recommended that this independent institution that is yet to be formed will include a department specifically engaged in the social well-being of the community.

### **Collaboration at a regional level**

As outlined in this report, other cities in West Sumatra such as Padang and Bukittinggi are promising examples because they are well-known and offer different forms of tourism. Existing tour packages only link Padang and Bukittinggi to the old centre of Sawahlunto. When combined with mining-based tourism in Sawahlunto, interesting tourist packages can be developed that will attract a wide range of tourists. This would divert tourists to different locations in West Sumatra and so broaden tourists' experiences while distributing the tourist capacity load among the different locations. Tour packages can stimulate the development of cultural tourism. On a regional level, the municipality might therefore want to investigate opportunities for collaboration with these cities. Such an approach could also involve more promotional advertising of Sawahlunto in Padang and Bukittinggi as a unique regional mining-heritage destination. This would increase awareness of what the town has to offer.

### **Collaboration with PTBA and RSUD**

As tourism increases and more visitors arrive at Sawahlunto, the need to develop the hospital to cater to their medical needs will become more pressing. We expect that an increase in tourism will stimulate the hospital's development into a renowned international specialized medical facility. Development of the mining sector will hopefully intensify collaboration between PTBA (as the property owner) and the hospital. It is recommended that the municipality facilitate these contacts.

As one of the municipality's major property owners, PTBA will continue to play an important role in the development process. It is therefore recommended that the municipality maintain close contacts with PTBA. As a lack of government funding brings alternative financing methods into focus, the municipality could study options for Corporate Social Responsibility (CSR) activities by PTBA or other companies in the surrounding area. CSR involves social activities that have a beneficial social impact beyond the company's own interests. By collaborating with various companies, the municipality might be able to find a solution for the town's future development.

### **Collaboration with BDTBT and KESDM**

At the local level, it is recommended that the municipality integrate these efforts with the mining sector. Here, collaboration with BDTBT in future development is crucial, as the latter has already demonstrated in Geopark. Geopark is a promising attempt to connect tourism and mining. BDTBT can provide the necessary expertise for study and work at Geopark, which in turn can become a powerful tourist magnet. Only a few tourists presently visit Geopark, due to a lack of promotional activities and advertising, poor access, and a lack of human resources in the tourist sector and among tour operators; it is still a niche market. A Memorandum of Understanding (MoU) or collaboration with ESDM could be initiated so as to produce suitable publications and intensify advertising about Geopark.

### **Collaboration with cultural institutions**

It is recommended that the municipality take smaller cultural groups into consideration and involve them in the process. Current initiatives in developing tourism could be taken up. A heritage trail brochure about Sawahlunto old city has already appeared, and there is a Songket craft workshop in Silungkang, but facilities for souvenirs or shopping, or complete tour packages do not as yet exist. Regional tour packages can also play a role here, as was discussed earlier. On a local level, the



municipality can facilitate and encourage tour operators to develop these packages, and encourage the creation of local commerce and local heritage destinations. Additionally, cultural institutions could open their museums during evenings, maybe one day a week, so that BDTBT students would have an opportunity to visit them. Currently, work and study hours prevent them from doing so.

#### **Encouraging research**

Furthermore, the municipality is advised to encourage and improve research into mining heritage and the hospital. At present, the existing museums do not provide sufficient information on the long and interesting history of mining, while the issues which surround the hospital's expansion demonstrate the need for studies of the building's historical and technical aspects so as to ensure that future adaptations will be done appropriately.

#### **Creating incentives**

As was pointed out earlier, current accommodation and restaurant capacity is insufficient for the anticipated number of tourists and mining personnel. By relaxing its regulations and permitting or certifying more individuals to open a restaurant or food stall, the municipality could remedy this situation. Furthermore, by working closely with the homestay owner association the municipality would provide more incentives for other house owners to join the association, which would create more homestays.

#### **Knowledge training**

With regard to homestays, an umbrella organization has successfully set some quality standards with respect to pricing and facilities. Meanwhile, the local government or the organization itself can collaborate with the private sector to provide homeowners with basic professional training in for example hygiene, (online) advertising, or basic English, to prepare them for give some professional training for the homeowners. For example, the hygiene quality or effective way of presenting and advertising their house on the website does not look interesting, or basic English training to prepare them for future demand.

In the future, a collaboration between homestay owners and tour packages organizers could create an

unforgettable experience. The package could combine activities that involve exploring the heritage trail whilst experiencing local life. Right now, guests can freely choose where to stay, but future packages could evenly distribute the guests among the various homestays. Adapting this idea requires a set of rules to avoid future problems such as homeowners who are being overlooked.

Regarding local artists and the local population, the local government should provide basic training in for example English in preparation of the growing numbers of international tourists who will visit the town. At the same time, the artists themselves can receive training in quality control and pricing. This would enable them to sell high-quality products for a good price that will ensure continuity. An umbrella organization could serve in a supervisory capacity to guarantee minimum standards. In the future, it might be possible to expand this system into a cluster of enterprises for each specific sector.

#### **Stimulating local economic development**

To stimulate local economic development, it is important to not only create an attractive tourist destination but also to embrace and encourage Sawahlunto's unique potential. One prime example are the local coal artists, who currently attract little attention from tourists or from the government. For a coal mining town, souvenirs made from coal can be an attractive memento for tourists visiting Sawahlunto. At present, no souvenir shop fulfils this function and the artists receive no municipal support.

Training the community and making the artists more aware of the quality of their products will help them to go forward. Existing concerns about transportation because of the material's fragility can be met by providing basic training in packaging. In addition, the government could use the Songket industry as an example and co-invest or collaborate with other private bodies to develop the craft sector. In the future, in a more evolved situation, it might be possible to implement a cluster of Sawahlunto-based enterprises in which each individual or group contributes its own expertise.

Having completed a BA in Architecture, **Grace Emely** worked for 3.5 years in Malaysia and Indonesia as an architect, both at an architectural design studio and for a developer. Following her passion for urban heritage, in 2015 she came to the Netherlands to pursue an MA in Urban Management and Development at the Institute for Housing and Urban Development Studies (IHS), Erasmus University, Rotterdam. Specializing in Urban Strategies and Planning, she focused on strategic planning, which integrates social and economic features into the physical and spatial dimensions of planning. In the course of her research she has assessed the impact of the Borobudur Temple Compound on the local economic development of the surrounding urban agglomeration. This immense compound, near Yogyakarta, is the first listed UNESCO World Heritage site in Indonesia, a status that has triggered international tourism which has had an impact on the

social and economic surroundings of this heritage site. In her work Grace aims to embrace the bigger picture by applying her vast intercultural experience and scientific methods to create a sound and holistic urban development.

**Vince Gebert** obtained an MA in Architectural History and another in Spatial Planning, both at Utrecht University. He is interested in heritage conservation management and urban redevelopment policies and practices in Indonesia. He is currently pursuing a PhD in the Department of Southeast Asian Studies of the National University of Singapore. His research centres on the role of colonial built heritage in the context of social and cultural transformations across post-colonial states, and how this often sensitive and value-laden heritage relates to identity building, memorialization, and heritage management at a local level.

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This report presents the results of a study of the development potential of Sawahlunto, Indonesia. The former coal mining town of Sawahlunto, located in the West Sumatra highlands above the town of Padang, has been listed as World Heritage site in 2019. Since coal extraction ended in 2002 the town has been in urgent need of new development to provide a base of existence for the heritage in question. Is tourism the single and best solution towards sustainable development of this World Heritage site, or can other options be tapped into to the achieve same goal?