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## Emerging Cultural Resilient Settlements

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### **Abstract:**

*Cultural heritage possesses important potentials for developing cultural resilient urban and regional transformations that enable the local communities to overcome various kinds of adversity. There is a lack of understanding by policy makers of how cultural heritage can cause resilience to emerge.*

*The objective of this article is to describe how cultural resilience is able to emerge in a living settlement. The study used a descriptive- case study design that covered the traditional living settlements of Poerwodadi in Suriname inhabited by a Javanese community.*

*By analyzing several significant development stages of Poerwodadi the study was able to discover the various events that led to the self-organization of intangible and tangible cultural structures that enabled a resilient community to exist. The various stages in gaining resilience has adjusted their behavior and caused to developed settlement in order to cope with the demands of the environment.*

### **1. Introduction**

The United Nation's 2030 agenda for sustainable development underlines the importance of creating urban spaces that are more safe, sustainable and resilient through urban planning and management. Cultural heritage possesses important potentials for developing culturally resilient urban and regional transformations.

In most third world countries with strong urban and rural traditional settlement planning policies tend to neglect particular cultural values. Awareness is still lacking concerning the relationship between a resilient settlement and the existing tangible and intangible heritage of the local community. There is a strong need for more empirical data showing how cultural resilience of living settlements emerges or can be achieved.

This article describes how cultural resilience of a Javanese living settlement in Suriname is gained and how the physical environment supports the emergence of resilience. A description is given of how cultural resilience has developed within a community. These insights can contribute to the awareness of the importance of culture as key elements in urban systems that contribute to a strong strategic capacity

### **2. Literature Review**

Clauss-Ehlers (2015) explains that cultural resilience is when cultural background (e.g. customs, norms, culture, cultural values, language) are used by communities to overcome adversity. A cultural resilient community enables the inhabitants to deal with and overcome adversity due to support of larger socio cultural factors besides their individual characteristics. It is also noted that cultural resilient entities adapt to adversity in a dynamic way rather than static. These dynamic adaptation processes are determined by character traits, cultural background, values, and supportive aspects of the social environment.

The capability to prevent, adjust and overcome changes through natural protection from transformation of arrangement layouts, aggregation schemes and uses is considered as an inherent self-organizing characteristic connected with resilience (Ramalingam et al., 2008). The socio-cultural dimension of historic built environments concerns resilience connected to the development of intangible heritage over time e.g. behavior, knowledge, construction practice and social

cohesion that helps a sense of identity for a community and awareness of land exploitation and management (Fatiguso et al., 2016)

According to complex science resilience in a system can emerge if the system contains agents (community members) that show adaptive behavior (Gunderson, 2003). These systems, having complex characteristics such as adaptivity and self-organization, will have gone through many strategies in order to survive whatever challenges they are faced with. Ramalingam et al. (2008) state that a series of processes with continuous and simultaneous stages can create the capacity of being resilient. The following four stages are mentioned: release, organization, exploitation and conservation.

*Release*, also called creative destruction, refers to the breaking of some existing organizational structures in order to make space for restructuring of the organization. This leads to growth in new areas because of urge to innovate and be creative. The second stage is *reorganization*, in which the agents will seek new opportunities and make new connections. In this phase new resources will be available and restructuring will be done. In the third stage, *exploitation*, the system will greatly exploit the existing resources in order to heavily invest in dominant structures. The ideas and themes that have booked success are now being reward and are growing stronger. Fourth stage is *conservation* (maturity stage) in which the structures have grown to be dominant and have claimed the landscape. When this occurs there will be less possibility for new structures to emerge.

Resilience in living systems is reached through a state of self-organization leading to processes producing components necessary for continuance of these processes (Mingers, 1995). Most important is to understand that resilience can only be achieved from inside or bottom up by the system's agents that have adaptive tendencies throughout the system. B

### 3. Methodology

The methodological approach of this study is a descriptive-case study design that covers a traditional living settlements in order to produce knowledge about the question of how cultural resilience is developed in a living settlement. The case study enables the research to describe how features within the context influence the success of cultural resilience. By incorporating a qualitative method data was collected through document analysis, interviews and observations. In order to provide a deeper understanding of the organization the case study is combined with a complexity science perspective (Crabtree et al., 2001; Stake, 1995; Yin, 1994). Complexity theory is added as companion to the case study because it simultaneously fosters an attitude of attention to emergence of patterns, dynamism and comprehensiveness while focusing attention on defined system properties. The research selected DessaPoerwodadi, a Javanese ethnic settlement in Suriname, as case study. The selection is based on the criteria of a settlement with a strong cultural background and that shows resilient behavior.

### 4. Area of Study

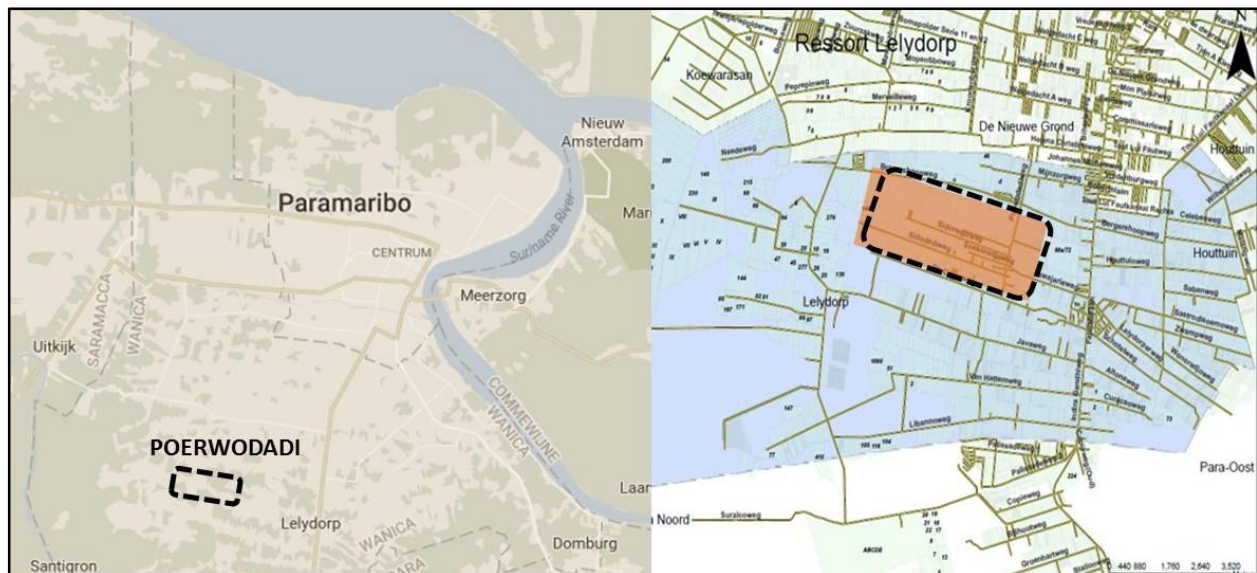


Figure 1: The location of Poerwodai Source: GLIS

Poerwodadi is a residential area located in Lelydorp, district Wanica. Previously it was a village municipality and since the 1980's it has been released. Currently it is part of the districts administration. Lelydorp is popular for its Javanese population with its rich cultural environment and peaceful community in a semi-rural setting. Lelydorp is known as one the fastest developing areas in Suriname were the mainstreet is dominated by the economic center.

Poerwodadi is founded by Javanese ex-contractors and new Javanese immigrants at the beginning of the 20<sup>th</sup> century. The former contractors came from various plantations in Suriname and settled first in the area of the Altonaweg, east of the railway line in Lelydorp. After a while they decided to look for a more spacious area for agriculture. They found this new area which was deeper towards the West side, thus creating Desa Poerwodadi. The area of Poerwodadi came into development around 1930 and was developed by the Javanese residents themselves. The roads were built manually with only using traditional tools and collective efforts. Poerwodadi became an official village community on January 5<sup>th</sup>, 1933 and was at that time inhabited by not more than 20 families. They laid out the dimensions of the plot themselves and started to development of the area through agricultural activities combined with small home-industries.

## 5. Results and Discussion

### 5.1. Cultural Characteristics of the Settlement

Poerwodadi is popular for its strong Javanese cultural preservation. The Javanese were brought from Indonesia to Suriname between 1890 and 1930. They were used as laborforce on the various plantation in Suriname. The Dutch brought about 34.000 Javanese during the plantation period and with them came the Javanese Adat, a cultural system of norms and values. The Adat together with spirituality, religion, language and cultural traditions is what has shaped the life of the Javanese in the new land. The cultural expressions and traditions of the Javanese Immigrants proved to be invaluable and a strong foothold in the difficult moments at the plantations. The Javanese culture and its traditions, their social control and their customary law of Adat contributed largely to their survival in the new land.



Figure 2: Wayang Kulit (left) and the Slametan ceremony (right)

The Javanese Adat with its multitude of social manifestations and acts is dynamic and goes along with the development of the society. The basic manifestations of the Adat that were most common during the Immigration and up until now are still evident in Poerwodadi are the Javanese values of *Rukun* and the *gotong royong*.

*Rukun* in the Surinamese setting is described as living in harmony with other people in the community and the spirit world. According to the tradition it was very important not to have any disturbances of this larger spiritual-mystical unity by a single individual since this could lead to negative consequences for all who are part of the social environment. In situations of difficulties and problems between two parties the Javanese will always try to avoid creating a situation that would cause lasting disharmony.

The *Gotong Royong* is a Javanese form of mutual help, support or assistance. The Gotong Royong can be seen as a very important part in complementing the Rukun. By doing all the activities concerned with the Gotong Royong the Rukun is further strengthened. There are several forms of Gotong Royong. One of these forms is the Gugur gunung. The Gugur gunung is based on the ideology that certain activities are performed for the sake of overall wellbeing of the community. The whole community is expected to participate in solving big problems the area is faced with. In these cases, the problems are complicated and need strong collective effort. Gugur means collapsing, breaking or falling out and Gunung means mountain. In Indonesia the whole kampung or desa would help to achieve the purpose of improving the build environment such as cleaning of the sewerage system, building of roads and setting up community centers.

The philosophy behind Gugur gunung is that the people should be aware that togetherness and kinship are important aspects and can be used to bridge obstacles with ease. It teaches also the meaning of sincerity and shows us to understand the importance of doing good deeds without expecting rewards in return. It teaches also the attitude and nature of sacrifice. How important it is to give priority to the general importance rather than private goals. It considers that the responsibility towards

the environment is most important and should be kept clean and safe. Furthermore, most important is the aspect of unity which is needed to form a strong community in order to develop in a god way.

### 5.2. Supporting Built Cultural Structures

The aspects of Rukun and Gotong Royong are strongly present in the living settlement of Poerwodadi. The study found that the harmony (Rukun) in the Javanese settlement (kampung) is based on the principle of building social cohesion through open and shared spaces that are interconnected. A basic aspect in the kampung is insurance of the connectedness of physical structures.

Nearly every house contains a space (Emperan) intended to accommodate social and cultural gatherings such as Slametan (offering of meals) and Sambatan (mutual assistance) to strengthen harmony and collectivity. The outdoor kitchen, usually in the back, is the biggest area and considered as the most important place in the house. Preparation of food is essential in Javanese culture and it is customary that the women of the kampung gather to prepare food for various traditional ceremonies.

On nearly every plot the research found a pattern of collective living. Three to five families living on one plot in which they share open spaces and self-developed internal roads/paths. The space on the plot is open and there are no physical borders. This is also the same for the neighboring plots. The borders between the plots are open allowing the community members to share each other's space, having a collective informal infrastructure and a strong social and secure network.



Figure 3: Collective living with open borders, shared space and internal roads

Further collectivity is strengthened by the mosques. The internal and external structure of the mosques is built in such a way that it accommodates not only prayer activities but also activities that strengthen the Rukun, such as regular gatherings to share meals, weddings and birthday celebrations, Slametans, Islam education, and many other social activities. Like the residential house of the inhabitants the Mosques have several Emperans and large kitchen that accommodate and strengthen the aspects of Rukun and Gotong Royong.

### 5.3. Self-organization and the Processes of Gaining Cultural Resilience

The local community of Poerwodadi is known for its strong collectivity in its social and cultural environment. They have managed to collectively conserve many Javanese cultural traditions and several cultural arts such as Gamelan (traditional Javanese music form), Wayang Kulit (puppet show), traditional Javanese Dance, Ande Lumut (folk stories) and Ludruk (religious music). The community also possess a high capacity of self-sufficiency. They have been able to survive different stages in which pressures were put on their social and economic well being. They were able to self-organize and create the structures needed to overcome the various adversities.

In order to analyze how the capacity of cultural resilience has come about the study identified several stages in which the processes of self-organization emerged. The kampung inhabitants have shown to be able to survive the many challenges they faced by using the aspects of Rukun and Gotong Royong.

The several stages related to the buildup of cultural resilience of Poerwodadi are:

*Moving to an undeveloped area (Release):* The first inhabitants were already settled in an area in Lelydorp that was already developed as living settlement. They were former contractors who previously lived in plantation settlements that were built and maintained by the Dutch and did not have to worry about their living areas. Because of the need for more space in order to cultivate rice they received permission from the government to occupy the area of Poerwodadi. This was done without assistance from the government in laying the basic infrastructure for the area. Poerwodadi was originally forest ground which was developed by the first families with a minimum of resources. The connecting path to Poerwodadi, the

agricultural fields, first roads, the situation of the plots and the houses were made collectively by hand. The Gugur Gunung was the back bone of all these initiatives. The Javanese had self-organized to create the new kampung without external help. The hardship and independency in developing the area established a much greater bond between the families. In this phase new resources were introduced such as more space for agriculture and living. But after a while problems occurred when it was found that the grounds were actually unsuitable for the cultivation of rice.

*Development of a traditional management system (reorganization):* A management structure was introduced when Poerwodadi became an official village community. A similar structure exists in the villages in Indonesia. The management was led by the Lurah (village head) and consisted of a Tyarik (secretary), a village recipient, Kabayans (messengers) and Jagabayas (security). The first mosque, Bekti Islam Sejati, was established and the Lurah and religious leader worked close together in managing Poerwodadi. All recreational, social, cultural and religious activities were coordinated by the Lurah with support of the religious leaders who decided the appropriate dates according to the Javanese calendar to have the activities. The Lurah and his team mobilized the community to improve the local infrastructure through Gotong Royong. The Gugur Gunung was at its strongest which resulted in a strong self-organization in the development of both tangible and intangible heritage.

*Development of social, cultural and economic structures (exploitation):* In this phase more families moved to the kampung and more plots for the building of houses were developed. The important principle was to have open plots with internal road networks beside the formal roads. The people lived close to each other, collectively and have the possibility to share each other space. Other functional areas such as a recreational space for sport activities, cultural space for cultural arts and religious space were developed by the community members.

The mosque as religious facility had a strong internal organization that consisted of the various Dukuns (ceremonial experts), the Santris (religious experts), the women group, sporting group, service group and the youth group. In this phase the different families began to self-organize in developing the cultural arts by making instruments by themselves and practicing the arts with self-taught knowledge that they received from their ancestors. They did not have the resources to get instruments and other tools from Java, which they received previously at the plantations. The strong urge to regain their Javanese cultural arts enabled them to be creative and to innovate. The cultural arts were performed within the open spaces in and between plots.

In the beginning of the development of Poerwodadi the families relied on the cultivation of rice in order to have income. After they found out that the ground was not suitable for rice cultivation the families had to look for other possibilities to earn money. They discovered the possibilities of producing Goma from bitter cassava that was needed in the textile industry. Soon bitter cassava cultivation was done on large scale in Poerwodadi and small home industries were created to produce Gomma. These were done collectively in the Emperans. More than in other Javanese settlements in the country the Javanese in Poerwodadi were active in producing baskets, mats and sweeps using natural materials, a knowledge that came with their cultural heritage. The social, cultural, religious and economic functions and structures began to establish.

*Management conflict (2<sup>nd</sup> reorganization):* In this phase managerial problems occurred in Poerwodadi. The first problem concerned issues with the second Lurah. According to the interviews the community was dissatisfied with his actions. They disagreed to certain decisions and organized activities in Poerwodadi because they were mostly only beneficial to the Lurah and his family or friends. He lacked in serving the interests of the community in general. This is when the members of the sport group Real Poerwo established S.S.C.V Poerwodadi (Sport, Social and Cultural Association) in 1978 in order to protested against the Lurah's action. They were mobilized the community and created a network with some government officials. Their efforts managed to replace the Lurah. The new Lurah received full support of S.S.C.V in serving the interest of the community. Due to their support the infrastructure and social environment improved. In December 1980 due to a drastic change in the Surinamese Government and the Military forces came to power, was decided that the Village municipality would stop the exist. The Lurah and his management team would not be in charge of managing Poerwodadi. From then on the religious leader of the Mosque together with S.S. C.V received the tasks of managing the area but could only coordinated the religious activities in proper manner.

With the help of SSCV anuplift started to come in Poerwodadi, the infrastructure began to improve once more: the sewerage system was maintained, the recreational/cultural facilities got renovated, and various activities concerning study, recreation and culture were organized for the youth. The association established a network with government and private sector outside the system and fundraisings were frequently held. Lots of traditional ceremonies such as Slametans, Baritan and cleaning of the cemetery were supported by the association. Up until now in only in Poerwodadi Desa the most varieties of Javanese cultural arts can be found.

*Conservation of the emerged structure in Poerwodadi:* In this stage the dominance of the socio-cultural elements has limited the opportunity for significant change. The various cultural ceremonies are of great importance. The Baritan (offering for protection), Bersih Dessa (Spiritual cleaning of the village), collective cleaning of the cemetery, Slametans (meal offerings) are done on regular basis. Organizational structures that have been established in the various stages due to the strong interrelatedness and interdependence are active and try to implement activities based on the Rukun and the Gotong Royong.

The Emperan as semipublic space, the network of informal paths and roads, the shared spaces overlapping the various plots, the open borders stimulating connectivity and security, street furniture for social connection, the self-sufficient gardens (vegetables, fruit and poultry), interconnected scales, the multifunctional Mosques, the cultural center with recreational facility are all physical structures that are developed to cope with adversity and are maintained and conserved.

## 6. Conclusion

The study has shown how the community of Poerwodadi managed to overcome the various adversities by relying on the aspects of their cultural values. Their adaptation to these adversities was possible due to their capability to live and work in collective manner. They made sure that the social cohesion was kept strong which helped them to maintain their identity. This cohesion was established because they lived in harmony with each other and would assist each other in need. Their physical environment is laid out in a way that all activities related to the Adat (Rukun & Gotong Royong) are accommodated. As a result of the cultural activities social contacts are strengthened and economic activities have emerged. All of these events, struggles and dedication to self-organize their intangible and tangible environment have contributed to emergence of resilient behavior.

The various stages in gaining resilience described above show that the Javanese have adjusted their behavior and developed their environment in order to cope with the demands of the environment. By making a collective effort to develop a completely new area with minimum resources, they have grown stronger to each other and established a strong, independent, well connected and interdependent community. Without help from the government or other organization they managed to self-organize through Gotong Royong in order to create resources needed for the area, set up various management structures (led by Lurah, religious leaders, cultural leaders, S.S.C.V), develop and conserve their traditions, ceremonies and cultural arts)

For professionals to be able to create effective plans for new or existing settlements it must be clear that the community should be enabled to express their culture in the settlement. Existing culture has developed simple rules over a certain period of time on how its community should behave, live and self-organize. A planner cannot create or stimulate resilience for a community out of nothing. Designed, planned and even organic growth of the area should be guided by cultural knowledge of the inhabitants who are or will be living in the area to be developed.

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