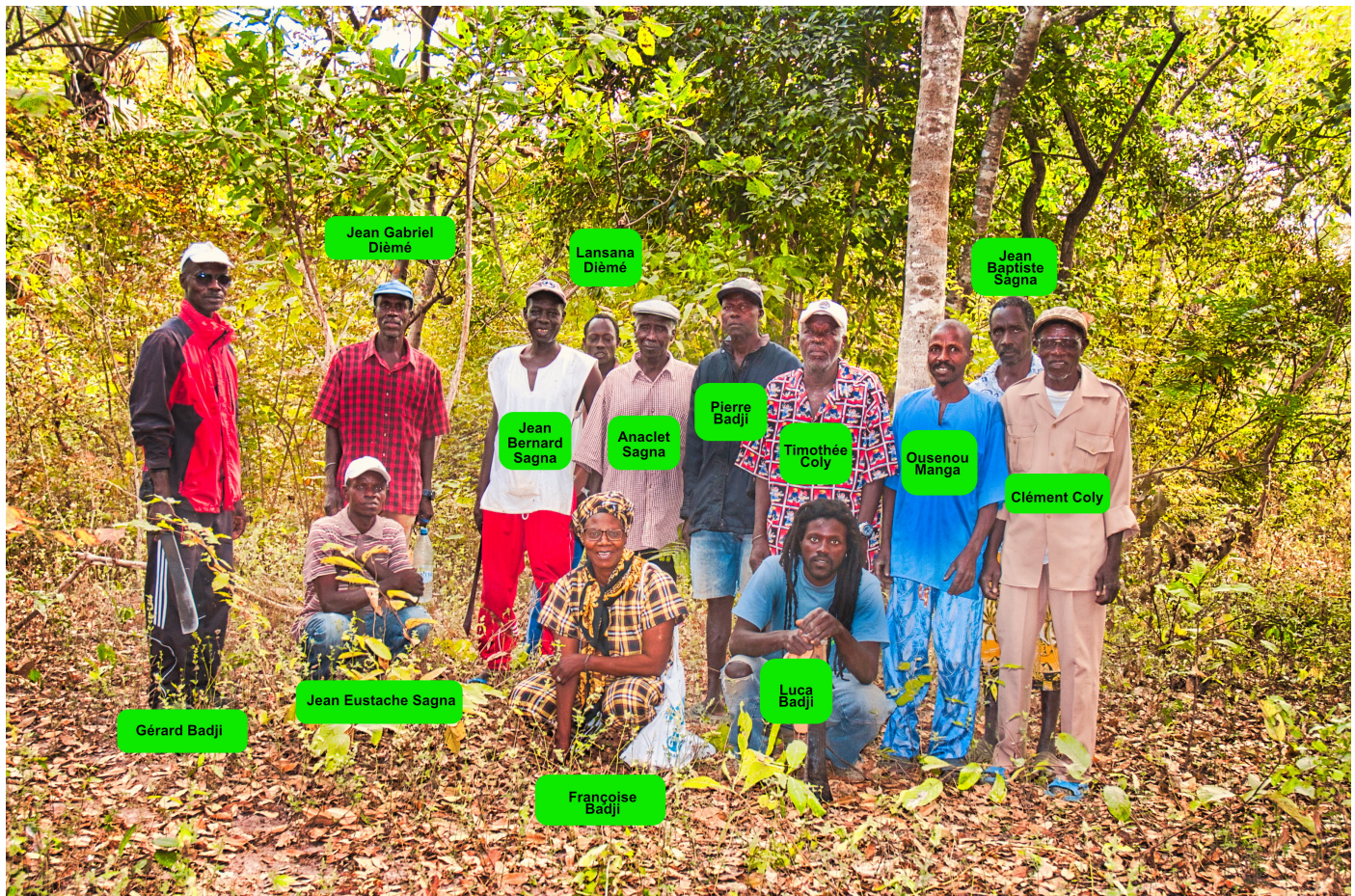


## AFFINIAM 4.0 - ABSTRACT

Affiniam has always been an **ecological village since its origins over 500 years ago**. This typical village of Lower Casamance in the southern parts of Senegal originates from the Bandial kingdom on the southern banks of the Casamance River. Before entering into the details of our ecological project called 'Affiniam 4.0', we shall first outline in a rough sketch its history beginning with the arrival of the Portuguese under the command of Dinis Diaz in the 15<sup>th</sup> century. At this epoch, one could call Affiniam and the Lower Casamance a region in a healthy balance between on the one hand their only god **Atuhe** (the Creator) - called "Emitay Yakonay" in Jola Fogny (the Lord One, "Emit Yanub" in Affiniam and in the Bandial region) who gave them rain for life and the nature watered by this rain - and a thankful mankind on the other hand, in modern terms just **Affiniam 1.0**, the first stratum that can be identified in our swift overview.<sup>1</sup>



*Traditional healers (Gusontena) from the to be Gureng Gaha Ubon  
(Medicinal Botanical Forest) in Affiniam (2016)*

But under the influence of colonialism, this nearly perfect equilibrium progressively showed signs of deterioration due to the influence of foreign troops, administration and economy. Later on, at the beginning of the XX<sup>th</sup> century, Casamance freedom fighter *Aline Sitoë Diatta*<sup>2</sup> (1920-1944, called the Casamance Joan of Arc) fought for instance for preserving traditional cereal crops. Portuguese had brought Asian rice<sup>3</sup> to Casamance, whereas the French imposed the culture of peanuts<sup>4</sup> instead of millet. Thus, the stratum of **Affiniam 2.0** became the epoch of great upheavals including deforestation as adverse consequence resulting from widely practised plantation of export crops.<sup>5</sup>

**Affiniam 3.0**, the next layer, was characterised in the first years of independence by a wave of new hope that turned unfortunately into substantial decline some years later. *Emile Badiane* (1915-1972), successful farmer and political leader of Casamance, gave new hope to his province with decisive reforms in gardening<sup>6</sup> (gardening school EATA, now "Centre National de Formation des Techniciens en Agriculture et Genie Rural"), forest productivity and conservation ("Centre National de Formation

des Techniciens des Eaux, Forêts, Chasses et des Parcs Nationaux - Djibélor”) and livestock farming finally (“National Animal Breeding Training Center, St. Louis”). But what could have been a powerful upswing in these essential areas became a severe downturn from the undermined agrarian reforms in the sixties<sup>7</sup> at a first step and then secondly during the major period of drought from 1968 on (un-forgotten 1973, catastrophic year throughout the Sahel with almost full lack of rainfall in Casamance)<sup>8</sup>. The worse state of agriculture was exacerbated in the following years by the so-called ‘events’, military clashes between governmental troops from the north and independence fighters belonging to the MFDC independence group of *Abbé Bertrand Diamacoune Senghor*<sup>7</sup>. Territorial disputes are considered to be the primary reason for this confrontation. When the Toucouleur mayor of Ziguinchor expropriated inhabitants belonging to indigenous tribes in favour of immigrants from other ethnic groups, especially Joola people felt cut off from the land of their ancestors. Finally, the sinking of the *Joola ferry* (under the authority of the Senegalese army) with more than 2,000 deaths may be considered as the emblematic disaster of this period.

We would like to fix the beginning of the **Affiniam 4.0** stratum and the following years of new effort at 1987 at the moment of *Père Benoît Dieme*’s visit at the commune of Allonnes in the Loire Valley near Saumur in France. During his stay in the parish of Sainte Thérèse en Haute Vallée, the committed Spiritan proposed during his homily on the occasion of Epiphany a **partnership** with Affiniam, the village he originates from. In close collaboration with his French confrere *Christian Pithon* and supported by a German friend (*Hans Georg Tangemann*) and his picture show, the twinning was soon established. After nearly thirty years of partnership, Allonnes can look back on a successful period of help. Village hall, visitor reception at the *Christine Humeau* accommodation, support for the local primary school and college, as well as important aid to the medical dispensaries in Affiniam and Bignona (county seat) run by the “Sisters of Sainte Thérèse de l’Enfant Jesus”. Finally, let us highlight the arrival of a delivery van full of useful materials like wheelchairs, sanitisers, bicycles, etc. All in all, the reliable French partners have a whole bunch of stories to be narrated.

To be realistic, we have to admit nevertheless that the relations among inhabitants are not clearly settled at any time. Let us quote a remark from *Elinor Ostrom*’s “Crafting Institutions” where poison and antidote are precisely defined : “*When institutions are well crafted, opportunism is substantially reduced. The temptations involved in free riding, rent seeking, and corruption can never be totally eliminated, but institutions can be devised to hold these activities in check. In order to decrease opportunistic behaviour, coordination activities, such as monitoring and sanctioning, may have to be increased.*”(Ostrom, page 35)<sup>9</sup>

March 2007 marks the beginning of the implementation period of the **new college**<sup>10</sup>, great step forward for the Affiniam born *Don Tomas Diande Da Costa Lopes* and his Spanish partners in the Catalan town of El Masnou.<sup>10</sup> Together with the ANAFA NGO for literacy programs, he wrote another success story in the Joola village of 5,000 inhabitants (during the period of annual rainfall). Later on, he managed the set up of power supply in the same village. Meanwhile, the college is fully functional even if inside the building and in the surroundings there is still a lot of work to do.

**In 2013, the new NGO ACCA, Association Casa Cœur d’Ange**, founded by a group ^autochthonous from Affiniam (especially by the president *Jean Gabin Coly*, *Luca Bassene Badji*, *Françoise Badji*, *Regina Sambou*, and once again like in 1987 *Hans Georg Tangemann*) opens new horizons<sup>11</sup>. After the successful period on a level of ‘We need - you help’, Affiniam tries now to enter the new level of ‘We do — you contribute’. The ‘*Angel’s hearts of Casamance*’, a local grass-roots organisation, put work for peace<sup>11</sup> in the foreground of their activities, being convinced that development is just another word for peace (Populorum Progressio, Encyclical of *Pope Paul VI*, On The Development of Peoples, March 26, 1967)<sup>12</sup>. Working for peace in Casamance means freeing mental power by emphasising the core values of traditional Joola life in Casamance. Freedom, equality, brotherhood, sustainable farming and gardening embedded in the basic trust in the one and only God *Emitay Yakounay* who gives rain and life is the wealth Joola people share. From this traditional centre core new activities can arise like modern festivals (Festivals ZigAff 2013, 2014 and 2015 in collaboration with the Ziguinchor located ZigFest). Youth is eager to listen to the messages of their actual heroes who preserve the roots of traditional life as the Joola singer *Gina d’Affiniam* does with “*Ji passul*”: “Come out and let us pray together for peace and health”. Changing mentalities passes through cultural manifestations all at once traditional and modern. ACCA contributes to the



transformation of mentalities acquired under colonial rule (“We are poor people”) in partnership with the French artist Luce Jotter and her painting workshop (“Discover the wealth inside yourself”). Teachers and pupils are even grateful to the France-based *Afrodanse*<sup>13</sup> association who regularly provides ‘a trunk for Africa’ full of educational equipment. ACCA also works in close collaboration with *Rainbow for Africa* and its Senegalese partner *Renken*<sup>14</sup>.

From 2016 on, ACCA makes the next step by proposing the Affiniam 4.0 Ecological Village Project. In our tailored and targeted approach the cultural and the ecological factor combine with one another. Before entering the details, we would like to explain the conceptions frame of our work. First, we have to emphasise the importance of the two value dimensions elaborated by Ronald Inglehart and Christian Welzel<sup>15</sup> within their research on cultural changes triggered by the modernisation process (World Values Survey):

1 Traditional values versus Secular-rational values and

2 Survival values versus Self-expression values.

Secondly, we refer to **Nobel Prize Elinor Ostrom** and her studies “Crafting Institutions for Self-Governing Irrigation Systems”. (1992)<sup>16</sup> The relation between her studies and the value issue is obvious. Where explaining how to craft rules related to varying cultural traditions she states: *“Although the climate, geology, soil conditions, terrain, and physical works of an irrigation system are obvious constraints, the shared belief systems of a particular region, caste, religion, or ethnic group also need to be considered in the institutional design. When shared understandings exist concerning the fairness of diverse allocation rules, appropriate leadership positions, and the rights and duties that individuals possess in relationships with one another, the basic repertoire of rules that can easily be used by suppliers aid users of an irrigation system is circumscribed.”* (page 52). Furthermore, Ostrom explains the conditions of successful projects: *„By ‘successful’, I mean institutions that enable individuals to achieve productive outcomes in situations where temptations to free-ride and shirk are ever present. A competitive market - the epitome of private institutions - is itself a public good. Once a competitive market is provided, individuals can enter and exit freely whether or not they contribute to the cost of providing and maintaining the market. No market can exist for long without underlying public institutions to support it. In field settings, public and private institutions frequently are inter-meshed and depend on one another, rather than existing in isolated worlds.”* (op. cit. 16) Ostrom claims that observing the above mentioned success principals can help avoid the ‘tragedy of commons’.<sup>17</sup>

From *Inglehart* and *Wenzel*’s value dimensions, on the one hand, and *Ostrom*’s criteria for successful institutions, on the other hand, we infer **five necessary conditions for a frame of successful ecological projects**. This frame...

...tends to strengthen secular-rational values — without forgetting the inherent rationality of traditional solutions.

.. .goes towards self-expression values — being aware of the inalienable right to survive.

...is awake to the permanent risk of free-ride and shirk and therefore establishes rules for the containment of these temptations.

. . .is based on a competitive market that is itself a public good.

.. .needs a fair settlement between private and public institutions.

We are convinced that our **Affiniam 4.0 Ecological village** project corresponds to the five above mentioned necessary conditions. Here are the **details**:

- **Reforestation** on land that belongs to the commons near rice fields north and south of the village.

- Construction within the commons of an **Impluvium house** (case à impluvium) according to the traditional type called in Joola Boulouf “egunor” (recovering health).
- Creation in the neighbourhood of a **Botanic garden** still on common ground with medicinal plants especially endangered species (the whole zone being solidly protected against livestock grazing.)
- Co-operation with the village schools in **teaching traditional knowledge and practices** within the Botanic garden and the Impluvium House.
- Sleeping accommodations for **visitors** interested in ecological and cultural issues.
- Construction of a **kitchen** with accommodations for traditional Joola cuisine.
- **Reception area** with able staff (presence of two guides speaking English and French, having deepened knowledge of Joola traditions, and being able to organise visits on demand).
- Complete power supply by **solar panels**.
- **Water supply** by a traditional well and a second well with immersion pump fed by a solar panel.
- **Filtering gardens** with water treatment plants (instead of cesspools).<sup>18</sup>

Before beginning our work, it is necessary to have a look on successful experiences throughout the world and their design principles. It is not enough to concentrate on the operational level (as was done in the “We need — You help” period). We must now – following the “We do — You contribute” motto – go beyond the transformation activities: *“In any public or private enterprise, the activities of individuals can be broadly grouped into two types: transformation and transaction ... Transformation activities are directed toward changing one state of affairs into another. Transaction activities are directed toward (1) the coordination of transformation activities, (2) the provision of information, and (3) the acquisition of a strategic advantage over others.”* (Ostrom, page 27) Building and operating the physical structure of an ecological village will be as time-consuming as the institutional tasks. But we expect a worthwhile investment to the long-haul destination of Affiniam 4.0.

**We started our activities in 2016** before the beginning of the rain period. Now, first of all, land has to be fenced by a suitable wire grid that will be doubled by a traditional fence with fig trees (*Ficus carica*), cherry-trees (*Prunus*), the tree called ‘kuparang’ in Jóola (*Tamarindus indica*), Horseradish tree - (*Moringa olifeira*). Secondly, a traditional banco house (mud brick) has to be set up to serve as a visitor’s accommodation and guardian habitation. Thirdly, traditional medicinal plants will be chosen in narrow collaboration with local traditional healers and other qualified and motivated village persons. Finally, as soon as possible, we should like to crown these first year activities by an Eco-festival with our own eco-song in Joola and French) to showcase our first accomplishments and to promote the idea of an ecological village. In the following years, we aim to gradually ameliorate the botanic garden and to construct an impluvium house based on the example of Egunor in honour of the traditional doctor *François Jean Baptiste Badji*, known as “U pilori” and famous for his successful treatment far beyond the immediate region. Thus the **Nature Reserve Botanic garden with medicinal plants** and its environment could be the source of a **broad ecological renewal of Affiniam** and other villages in Casamance. *This first version of our Affiniam 4.0 Ecological village-Project will again be discussed with friends and partners in Casamance and elsewhere; some paragraphs may be modified later on. You can contribute to this discussion by sending an e-mail to info |@| botabad.de . As this text has not been written by a native speaker, we invite you to feel free to propose any corrections.*

Thanks a lot!



# Footnotes

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- <sup>1</sup> Olga F. Linares: **Power, prayer, and production** : the Jola of Casamance, Senegal. 1992
- <sup>2</sup> Baum, Robert M.: **West Africa's Women of God**. Indiana University Press. Kindle-Version. © 2016 by Robert Baum. "Like the Abrahamic prophets, they were teachers as well as visionaries. They focused on the immediate needs of their communities to restore a proper relationship with the supreme being through ethical behavior and effective ritual, to end devastating periods of drought and other environmental dislocation, and to defend their communities against raids by neighboring groups. **Diola prophets** refrained from the use of mechanical means of prophesying, such as the tossing of palm kernels or cowry shells, or the reading of the entrails of sacrificed animals, which were typical of diviners. Baum, Robert M.: West Africa's Women of God (p.5). Indiana University Press. Kindle-Version.
- <sup>3</sup> **African rice**, see details on: <https://doi.org/10.1186/s12284-020-00449-6>
- <sup>4</sup> See: **Amadou Cissé / Meghan O'Donoghue**: Cultivation of peanuts in a Sahelian region historically dominated by millet farming
- <sup>5</sup> **History of Casamance**: Mohamed Lamine Manga, La Casamance dans l'histoire contemporaine du Sénégal, L'Harmattan, Date de publication : 01/10/2012  
<https://liseuse.harmattan.fr/9782296993075>
- <sup>6</sup> For **watermanagement** see: Marie-Christine Cormier Salem: Gestion et évolution des espaces aquatiques: la Casamance. Éditions de l'ORSTOM. Institut français de recherche scientifique pour le développement en coopération. Collection Études et Thèses, Parisi 992
- <sup>7</sup> In the 70s, the Senegalese civil servant *Adama Goudiaby* and the French sociologist *Christian Saglio* created a network of large, traditional mud houses in the Impluvium style (Camps at Abene, Affiniam, Baila, Elinkine, Dioher, Enampor, Fintiok, Kabadio, Kafountine, Koubalan, Koubanao, Oussouye, Sito-Koto, Saloulou, Thionk-Essil), partly renovated, others have since been launched.
- <sup>8</sup> **Pluviometry** since the 1930s: Jean-Baptiste Ndong, L'évolution de la pluviométrie au Sénégal et les incidences de la sécheresse récente sur l'environnement / The evolution of rainfall in Senegal and the consequences of the recent drought on the environment [article].  
[https://www.persee.fr/doc/geoca\\_0035-113x\\_1995\\_num\\_70\\_3\\_4212](https://www.persee.fr/doc/geoca_0035-113x_1995_num_70_3_4212)
- <sup>9</sup> Ostrom: <https://idl-bnc-idrc.dspacedirect.org/items/4758d829-3e0c-4527-83c0-2fc4c1d36f40>
- <sup>10</sup> **ANAFa school project**: (2016). Help from the Spanish town of **El Mataro**:  
<https://www.solucionesong.org/ong/anafa-los-amigos-de-ziguinchor-asociacion/1310/view>
- <sup>11</sup> ASSOCIATION CASA CŒUR D'ANGE **ACCA**, Récépissé de Déclaration d Association N° 16454 / MINT / DGAT / DLP / DLA-PA, B.S.D.A numéro: 38353021213. Poste: Keur Massar, BP : 80077
- <sup>12</sup> **Populorum Progressio**: [https://www.vatican.va/content/paul-vi/en/encyclicals/documents/hf\\_p-vi\\_enc\\_26031967\\_populorum.html](https://www.vatican.va/content/paul-vi/en/encyclicals/documents/hf_p-vi_enc_26031967_populorum.html)
- <sup>13</sup> **Afrodanse**: <https://www.afrodanse.com/index.php>
- <sup>14</sup> **Renken**: <https://www.renken.it/>
- <sup>15</sup> **Ronald Inglehart and Christian Welzel**:  
[https://www.researchgate.net/publication/230557603\\_Modernization\\_Cultural\\_Change\\_and\\_Democracy\\_The\\_Human\\_Development\\_Sequence](https://www.researchgate.net/publication/230557603_Modernization_Cultural_Change_and_Democracy_The_Human_Development_Sequence)
- <sup>16</sup> **Crafting Institutions for Self-Governing Irrigation Systems**: <https://www.canr.msu.edu/resources/video-crafting-institutions-for-self-governing-irrigation-systems>
- <sup>17</sup> **Tragedy of commons / Common Pool Resources**:  
<https://www.ostromworkshop.indiana.edu/courses-teaching/teaching-tools/tragedy-commons/index.html>
- <sup>18</sup> **Filtration**: <https://www.newsbytesapp.com/news/lifestyle/budget-friendly-natural-pond-filtration-in-africa/story>





*Foyer at Enampor*

*Rice farming at Affiniam*

