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Porte-voix pour l'**éducation** en Afrique

## IDAY PROJECT BANK

# RAISING THE QUALITY OF EDUCATION WITH SCHOOL GARDENS SUPPLYING NUTRITIOUS AND ANTI-MALARIA CROPS

Countries: **Kenya, Uganda, Rwanda, Burundi, DRC (Kinshasa, Kivu),  
Togo, Benin, Burkina Faso, Ghana, Guinea, Senegal**

Total Cost: **€ 1 033 602**

External funding: **€ 993 602**

Number of beneficiaries: **1.3 million pupils**

PROJECT PUBLISHED ON

[www.iday.org](http://www.iday.org)

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## 1 IDENTIFICATION OF THE PROJECT PROMOTER

### 1.1 Organisation promoting the project

Name of organisation/institution	IDAY-International
Legal status	Association Internationale Sans But Lucratif (aisbl)
Year of creation	2008
Recognized and subsidized as	International Non-Profit seeking association
Purpose or mission	Promoting Quality Education for All in Africa
Address of head office Street nr. & box Postal code & locality	Rue des Jambes 19 BE-1410 Braine l'Alleud Belgium
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Name of bank	TRIODOS
Account nr. or IBAN and BIC (SWIFT) codes	BE93 5230 8026 6767 TRIOBEBB
Name of bank account holder	IDAY-International

### 1.2 RESPONSIBLE PERSON (authorised to commit the organisation)

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Function within the organisation	President
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### 1.3 CONTACT PERSON (if different from the person authorised to commit the organisation)

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#### 1.4 General information on the organisation

<b>objective</b> of the organisation	Promoting Quality Education for All in Africa through the empowerment of African civil society and advocacy (constructive dialogue with the governments).
<b>activities</b> of the organisation	Coordination of national coalitions of civil society organisations in Africa and Europe; advocacy programmes on the right to education of specific categories of vulnerable children & youngsters; promotion of improved health in schools; collective commemoration of the International Day of the African Child (June 16); promotion of locally-driven projects through a Project Bank.
<b>expertise</b> of the organisation in relation to the project	The network was born from the combined experience of its founding members in Africa and in Europe, including 7 years of experience of financing of education projects by the Message of Yaguine & Fodé Fund (King Baudouin Foundation). Its Chairman has 40 years of professional experience with development financing. The network concept is based on the recommendations of key authors and specialists in development financing & education.
<b>geographical</b> scope of the organisation's activities (district, commune, region etc.)	In 2012, the IDAY network is active in 18 African and 8 European countries, working with some 300 organisations catering for about 150 000 vulnerable children & youngsters.



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## 2 THE PROJECT

### 2.1 Synthesis of the project

Project title	Promoting quality education for all with school gardens supplying nutritious and anti-malaria crops.
Short description of the project (2 lines max.)	Cultivation of school gardens with highly nutritious crops & <i>Artemisia annua</i> , and monitoring of the impact on the quality of education.
Budget of the project	total budget: € 1 033 602 support requested: € 993 602
Duration of the project	date of beginning: September 2012 date of end: December 2017

### 2.2 Where will be the project carried out?

Place(s) in which the project will be carried out	Senegal, Guinea, Burkina Faso, Benin, Togo, Ghana, DRC, Burundi, Rwanda, Uganda, Kenya.
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### 2.3 Description of the project content

#### 1. Establishment of school gardens.

In each country, in Year 1, a number varying from 2 to 10 (average 5) schools\* will plant nutritious plants and *Artemisia annua* with the support of local communities, teachers and students. In each garden, at least 10% of the area will be reserved for the production free of charge of plants & seeds for another 5 schools. Advocacy campaigns will be conducted to explain to the population the *raison d'être* of the project and convince the authorities of the interest in supporting this initiative. The national IDAY coalition will teach the proper cultivation and use of *Artemisia annua* against malaria. First nurseries will be established in rented areas, (giving time for the schools to prepare the land), to start the process). Initial seeds of a list of well-adapted plants rich in nutrients and of *Artemisia annua* will be purchased. Nutrient-rich plants species will include: moringa, citronella, and various species of citrus, guavas, mangoes, stevia, vegetables like carrots (vitamin A) & leguminous crops rich in proteins. Moringa and *Artemisia annua* will also be produced to clear water for drinking. The land of the school garden will be prepared by the local communities and students, fenced and planted. The whole process will be assisted, guided and administered by the local promoter and supervised by the national IDAY- coalition. Each garden will reserve at least 10% of the land to produce plants & seeds to supply minimum of another 5 schools. Collaboration with CARITAS International has been obtained in countries where both IDAY and CARITAS are present. Discussions are also underway with the Food & Agricultural Organisation (FAO) in the light of the recent publication of a UN report on



the close relationship between nutrition/health and education which IDAY has been promoting since June 2011 (see June 16 2011 report on our website).

## **2. Agricultural follow up of the project.**

A university will be selected to verify cultivation practices and to record in guidebooks the most appropriate ones for each climate and soil conditions. The research will benefit from IFBV's tests with other varieties, including some for the drier areas of the Sahel. The Agricultural Faculty of the Belgian University of Liège (Gembloux) and Kenyatta University have offered their services (The MOU with the latter will be signed in August 2012). IDAY is also seeking collaboration with the Association for the Green Revolution in Africa (AGRA) headed by Kofi Annan to harness support from local farmers in getting collective support for the production of food and/or financial support for their local schools. Participation is also being sought from two European enterprises with large scale industrial tropical plantations in Africa to provide direct agricultural and medical support since they are usually well equipped with competent staff and their health costs represent a large share of their production costs. They also suffer from workers' absenteeism which could be overcome by *Artemisia annua* planted on their premises. They could also disseminate the plants and practices among the local population and participate in the financing of the project.

## **3. Clinical tests.**

Clinical tests to confirm the research undertaken by numerous universities on the effectiveness of *Artemisia annua* as a repellent, prophylaxis and cure against malaria are needed as a condition for the World Health Organisation (WHO), and Institute for Tropical Diseases in Antwerp to give the green light for the widespread use of the plant against malaria. The African branch of WHO agrees with the use of *Artemisia annua* as a traditional medicine. Nevertheless, IDAY considers that full-scale clinical tests recognized by the international community are useful and would in particular allow to track potential resistances to the natural use of the plant. Hence IDAY is concluding a Memorandum of Understanding with Kenyatta University to conduct these tests together with the Kenya Medical Research Institute (KEMRI). They will include tests with pregnant women and small children with specially adapted medical treatments (suppositories) based on extracts from *Artemisia annua*. A second battery of tests will be conducted in another country, selected on the grounds of the level of the local support and project development. Results will be published in international medical journals. The costs of these tests estimated at USD 1.12 million and will be co-financed by Kenyatta University and a private fund to be identified. These costs are not included in the present project.

## **4. Communication.**

Experience in Kenya has shown that the most effective way to spread the use of *Artemisia annua* in its natural forms, are the **Youth Clubs**. They have developed preventive healing techniques, production of mobile nurseries, multiplication by cuttings, etc. In return, these youngsters are only asking for opportunities to travel. Hence the project provides for travelling costs of the most deserving members of each country to other countries to help spread good agricultural practices and medical use of *Artemisia annua* and participate in international events on the crop.



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**National and International meetings** will be held every other year, to take stock of progress made and exchange good practices. The conferences will be organized by IDAY-International and its members at the European Parliament, in participating universities in Africa or in Europe to exchange the latest news on progress achieved and best practices. They will involve universities with active research programmes on the use of *Artemisia annua* against malaria and other diseases (schistosomiasis, leishmaniasis, etc.), in water treatment and on allelopathic effects of the crop.

**Annual reports** will be published in main international languages and local languages used in Africa.

#### 5. Management of the programme.

The programme will be managed by a person with medical background, particularly community medicine, versed in tropical diseases and with African roots. This person will be supported by IDAY-International, located in an African city with easy flight connections to the rest of Africa.

Evaluation includes external auditing of the project accounts, production of a midterm evaluation report produced by the project itself and a final evaluation report entrusted to an external evaluator selected with the participation of the donors\*\*.

\*Except Kenya, which starts off with 100 schools (40 -80 schools in 2012).

\*\*IDAY-International statutes allow its main donors to be represented on its Board of Directors.

## 2.4 What is the objective of your project?

The overall aim of the project is to improve quality of education and learning capabilities as a necessary complement to the current quantitative drive to increase school intakes under the pressure of the Millennium Development Goals. It is indeed demonstrated both in Northern and Southern countries, that better health is a key condition for higher learning performance. Furthermore, “empty stomach has no ears”. UNESCO statistics show that while initial school registrations have increased significantly, drop-out rates remain too high to avoid illiteracy levels to drop in Africa. Since food distribution by World Food Programme (WFP) and other international bodies have dwindled, helping schools produce their own food for the children is of tantamount importance, especially for those coming from very poor families who cannot afford school meals\*. While the first schools in each country will be mainly at secondary level, ultimately primary schools will also be involved.

The University of Bangui has also demonstrated that polluted water can be purified with a combination of moringa and *Artemisia annua* extracts. Hence, the gardens will also provide the basis for reducing the impact of dysentery, the second most deadly disease in Africa.

Academic performance of the pupils benefiting in the project will improve significantly as demonstrated by the Kenyan experience. Specific measurement of performance will be part of the evaluation component of the project.

In terms of nutritional value, the project would raise the children’s intake of vitamins A & C and of vegetative proteins. This will also enhance their cognitive capacities.



## 2.5 Which target group(s) do you wish to reach?

Over 5 years, the project should contribute to the establishment school gardens in more than 4 000 schools from 12 countries benefiting about 1.3 million pupils, about 15 000 teachers and their families. These goals have been fixed on the basis of the two-year experience with the *Artemisia annua* project in Kenya and the proposed school garden project elaborated by a member of IDAY-Uganda (see [www.iday.org](http://www.iday.org) – Project Bank. Project n° 21).

The project is not expected to change the existing ratio girls/boys, but it may be noted that girls were among the initial driving force of the successful Kenyan experience. The delivery of regular school meals with nutritional rich products and protection against malaria should benefit mostly very poor families.

An important by-product of the project will be the creation of youth clubs. In Kenya, in 2 years' time, 46 youth clubs were participating in the dissemination of *Artemisia annua* cuttings in mobile nurseries. This programme will be supported by an estimated 240 youth-clubs whose nature and composition will vary from country to country (scouts, local students, members of organisations of the local civil society) and Parents-Teachers' associations or local farmers' communities (see example of FES II Project in Togo – IDAY-Project Bank, Project N° 10).

## 2.6 What are the projected results/concrete realisations of the project?

The project will stimulate larger enrollment of vulnerable children (mainly very poor children who cannot afford to pay school-meals), by 15%, lower the drop-out rate by 15%, and raise the end-of year exam results by 20% in participating schools. These goals are well below the performances observed in Kenya where 80 schools joined the programme over 2 years; The two schools who initiated the programme in year 1, improved significantly their regional and national ranking, one got for the first time in its history 100% of its students to succeed entrance exams into university, and reduced its health expenditures by 90%. Kamiti Prison in the Nairobi neighbourhood saw as from year 1 its prisoners' request for hospital treatment drop by 50%. These results were achieved on the basis of the regular intake of *Artemisia annua* tea and do not take into consideration the impact of improved nutrition at school. Several countries (Benin, Burkina Faso, Burundi, DRC, Rwanda, Senegal) have already tested the crop prior to project initiation and will therefore have advanced knowledge of the cultivation techniques of *Artemisia annua*, hence reducing the high failure rates of year 1). *Artemisia annua* is in fact spreading in Africa in an uncontrolled way. The collaboration with other partners like AGRA's and CARITAS' local partners will also boost the programme. Finally, these results do not take into account the impact of the pupils' transmission of knowhow acquired at school to their family and surroundings.



## 2.7 Specific questions

### 2.7.1 View of the governmental authorities on the project

In each country, Government's competent ministries (Education & Health) will be informed of the project proposal and their support sought. Full support is expected for the component regarding production of nutritious-rich crops. In Burkina-Faso, the project would even be part of a Government-sponsored drive for raising education quality on a country-wide scale. As to the *Artemisia annua* component, no difficulties are expected in countries where the use of *Artemisia annua* tea against malaria is already officially authorised (DRC, Senegal). In others, according to WHO's rules, approval for such a programme depends on the national authorities, and in particular the Ministries of Education and of Health. However, as long as the World Health Organisation (WHO) maintains its reservations regarding using *Artemisia annua* against malaria, this particular component may be held up for some time. IDAY is under discussion with WHO, Rollback malaria, and other internationally renowned organisations to change their attitude against the reliance on *Artemisia annua* tea to treat malaria. In some countries (Rwanda, Kenya) approval is sought from the Ministry in charge of traditional medicine. Considering the cost of alternative treatments of malaria and the growing fear of resistances with pharmaceutical products, *Artemisia annua* natural products seem at this stage the most secure and efficient way to eradicate malaria and reduce the impact of dysentery among school children in Africa.

### 2.7.2 Involvement and contribution of students' parents

*Maintenance of fixed investment; existence of Parent/Teachers Committee*

Parents, local farmers, teachers and students and youth clubs will have an interest in maintaining and expanding the school gardens for the sake of their beneficial effects on the children's learning conditions, higher school marks and on the living standards of the whole community. The school-gardens will be a testing ground for introducing high-nutritious plants in the community and reinstating some traditional plants neglected under pressure for the adoption of foreign "modern" varieties and medicines.

### 2.7.3 Participation of the young beneficiaries in the project and in the organisation responsible for its implementation.

The main framework for encouraging the participation of the young beneficiaries will be the youth clubs. Their active role will be encouraged in several ways: the lecture and posting of the Message of Yaguine & Fodé (see [www.iday.org](http://www.iday.org) – Who we are.) the two Guinean boys who sacrificed themselves in 1999 to let the world know the despair of the African youth regarding the poor quality of their education. Encouragements through the financing of travels abroad, will also encourage their participation. They will also be asked to play each year an active role in the





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commemorations of the International Day of the African Child (June 16) to promote education, healthy feeding and proper health care, including advocacy campaigns addressed to their government.

**2.7.4. Measures taken or to be taken to ensure that the project will contribute to the maintenance or enhancement of the environment and be sustainable (no exploitation of non renewable resources at the expense of future generations, disposing of waste, ....)**

The plants selected for the school gardens will include as many local plants as possible, rehabilitating often neglected or forgotten species. When foreign varieties are introduced, the local environmental authorities will be consulted to verify that they do not become invasive. IDAY-International consulted WWF-Europe on the potential invasive character of *Artemisia annua*, and was given a clean go ahead, considering the temperate climate origin of the plant which makes it difficult to cultivate in Africa.

The environmental aspect of the project could be further enhanced by the installation on a wider scale of energy-saving cooking stoves (Jiko) in Kenya (see above) and by duplication of the Ugandan Rainwater Collection project ([www.iday.org](http://www.iday.org) – Project Bank N° 16).

**2.7.5. Gender balance**

Since the first children that poor families keep home when they cannot afford paying school fees and since girls are the first victims among the later years school drop outs, a project aiming at reducing this rate should benefit mainly girls. This, however, remains to be proven and will be the subject of particular attention during project evaluation.

**2.7.6. Promoter's relationship with IDAY, and level of participation foreseen in the network's activities (date of the signature of the Charter or Memorandum of Partnership)**

IDAY-International, the apex organization of the IDAY network, is the promoter. Only schools or organisations member of IDAY will be eligible for financing under the project. This condition is necessary to ensure proper supervision of the use of funds under the collective responsibility arrangements among members of IDAY's national coalitions.

Participating schools and organisations will participate in advocacy campaigns as specified in IDAY's Charter.

**3. PROJECT IMPLEMENTATION**

**3.1. Phases and timing of implementation / development of the project.**



The tentative time schedule of the project is as follows

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Number of Countries	2	5	10	12	12
Number of Schools	100	165	400	1585	4310
Number of pupils	30000	49500	120000	475500	1293000
Number of Youth-Clubs	60	100	120	150	240

The number of schools adhering to the project will vary from country to country. On average, it has been assumed that they will grow progressively from 5 in year 1 to 1000 in year 5 following the free supply of plants and seeds from schools initially furnished by the project and financial support during the first 3 years. Growth in the 4<sup>th</sup> and 5<sup>th</sup> years in each country should be spontaneous, motivated by the results in the first participating schools. Hence, the number of participating schools in each country will multiply by 5 during the first 3 years, by 2 thereafter. The average number of students per school has been set at 300, which is far lower than the average of 500 students observed in Kenya.

The number of Youth Clubs will start in year 1 with a minor increase over the 46 existing clubs in Kenya to 240.

### 3.2. Current status of the project

The Uganda School Garden project started in 2012. Regarding *Artemisia annua*, the first plantations were launched in 2010 and 2011. The spectacular results obtained in Kenya in 2011, are at the origin of this project.

Already a number of schools have been convinced to participate in Burundi, Togo and Senegal. Financing is awaited to expand the project at the pace indicated in the table above.



#### 4. BUDGET

##### 4.1. Outline budget table

Anticipated expenditures	€	Anticipated revenues	
Creation of school gardens.	523 052	IDAY contribution	10 602
Of which :		International organisations	350 000
Prospection =19%		Bilateral donors	100 000
Plants (year 1 only) =1%		Private donations	470 000
Cultivation tools & work = 41 %		Funds specialised in medical and agricultural research	
Awareness raising = 9%			
Administration = 20%			
Contingencies = 10%.		Participants' contributions	53 000
		Others (to be specified)	50 000
Agricultural support	100 550		
Medical tests & follow-up			
Communication & advocacy	183 450		
Youth Clubs	54 150		
Administration, Evaluation	172 400		
Auditing			
Contingencies 10% included			
In each component.			
<b>Total expenditures</b>	<b>1 033 602</b>	<b>Total revenue</b>	<b>1 033 602</b>
<b>any surplus</b>		<b>any deficit</b>	

Schedule of expenditures per year:

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
<b>Amount €</b>	91 990	230 495	176 745	313 180	221 192
<b>%</b>	8,9	22,3	17,1	30,3	21,4

##### 4.2. If applicable, allocation of funds requested from outside donors

No specific allocation of the funds from each donor is foreseen, unless requested. However, they should consider that money is fungible.



#### 4.3. Framework or contract conditions for a possible financial partnership

Administration costs remain close to 20% of total expenditures. This amount exceeds the usual level but results from the very low costs at field level because of the free of charge participation of Youth Clubs that ask as only retribution the opportunity to travel in Africa and now and then on other continents.

### 5. SUSTAINABILITY (ROADMAP TO FINANCIAL AUTONOMY OF THE PROJECT)

After 5 years & considering the awareness raising campaigns both within the schools among the pupils and teachers, and with the local communities, it is expected that Parents' & Teachers' Associations as well as the Youth Clubs will expand the project further to a large share of the schools in the respective countries. The production of plants by each school for other ones, including those where first-year crops might have failed, will ensure continuous production in participating schools.

Within 5 years, the official organisation in charge of malaria control should have come around to support this grassroot, cheap and accessible mean to eradicate malaria in Africa.

Successful schools could even produce food for sale, hereby financing the schooling of children with limited means.

Advocacy campaigns will be aimed at convincing government officials to support the project both from a health and education points of view. Savings in health costs related to the use of *Artemisia annua*, both against malaria, dysentery and other diseases, could be spent either to reinforce the national health system and/or the education network (teachers' training, development of special learning tools, etc.)

The conditions of longer term sustainability of the programme will be established on the basis of the results of the clinical tests that will be available about 5 years after their launching.

### 6. EVALUATION

#### 6.1. The evaluation criteria

The evaluation criteria at basic level are those indicated at paragraph 3.1 with special emphasis on access for very poor children, costs of meals and their nutritional value.

They will include total area planted, type of species, and production costs. The agricultural reports and results of clinical tests will be included in the project performance criteria.

At the higher level, education quality will be measured by changes in the rate of teachers' and pupils' absenteeism, in the regional and/or national ranking of participating school in terms of school results, reduction in dropout rates, changes in the girls/boys ratio and success rates at higher education entrance exams. For schools with health expenditures, the reduction in these expenditures will also be measured.

The number of teachers and pupils suffering from malaria crises will be recorded carefully, including the intake of *Artemisia annua* tea or other ways of intake. Particular attention will be given to eventual resistances or allergies to *Artemisia annua* tea.



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## **6.2. Timing of the evaluation process**

The criteria will be measured annually: baseline measurement will be carried out in year 1, and changes as from year 2 to 4. The results will be reported annually on a national level and at the mid-term review and final evaluation at international level.

## **6.3. Evaluation method(s)**

The method will consist of comparing country objectives with actual achievements, verification of accounts by external auditors. The final evaluation will be entrusted to an outside consultant selected together with the donors.

## **6.4. If applicable, plans to ensure continuity of the project**

If the project proves successful in the countries selected in this first project, financial support will be sought to extend it to other countries.

## **6.5. Publication, communication and monitoring of the project's results**

Communication of the results forms an integral part of the project. Agricultural manuals will be produced by the universities in charge of that component of the project. Results of the clinical tests will be published in professional international journals. The findings of the project in terms of nutritional levels of the pupils and control of malaria and other diseases, will be communicated through national and international conferences and publication of the evaluation reports in international and possibly also regional languages.