The radiological impact of Uranium Mining activities of AREVA subsidiaries in NIGER

Example of an efficient cooperation process between a local NGO (AGHIRIN'MAN ,Niger) and a scientific organization (CRIIRAD, France)

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Association

CRIIRAD

Laboratoire

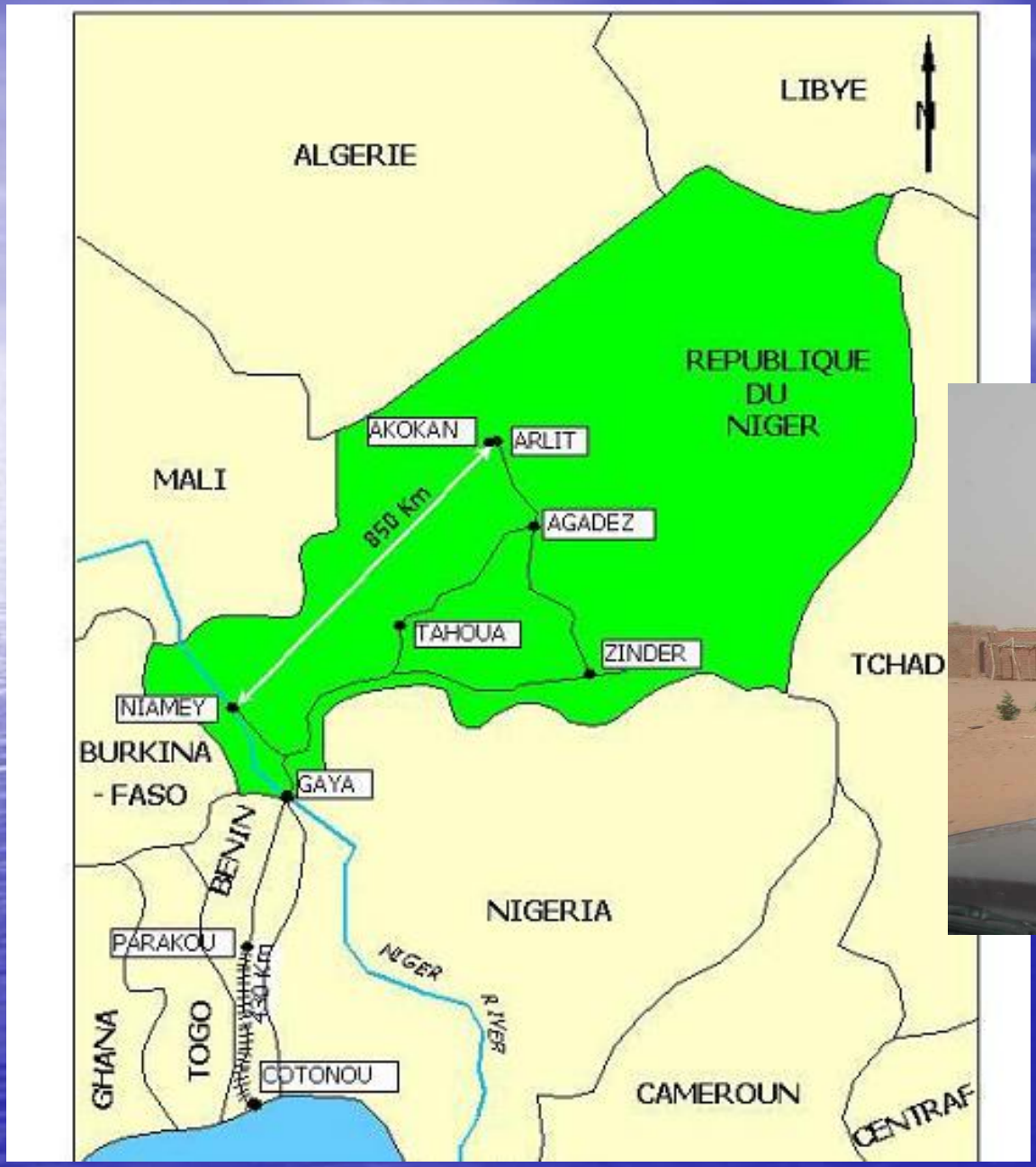
April 2015

- Since the 70's : more than 130 000 tons of uranium have been produced in Niger
- Compared to 76 000 tons extracted from 1946 to 2001 in France (about 237 uranium mines / all closed)

Mr Almoustapha ALHACEN, président of an NGO in Niger : AGHIRIN 'MAN asked for CRIIRAD support in 2003

Crédit photo : CRIIRAD, déc 2003

CRIIRAD mission to Niger / December 2003, first step of an ongoing process of mutual learning through science-activism


LIBYE
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NIAMEY
BURKINA
- FASO
GAYA
BENIN
NIGERIA
PARAKOU
430 Km
NIGER
RIVER
GHANA
TOGO
COTONOU
CAMEROUN
CENTRAF

Open pits at SOMAÏR uranium mine (AREVA)

Crédit photo : AREVA

-Actionnariat : AREVA NC 63,4 %, SOPAMIN (Société du Patrimoine des Mines du Niger, anciennement ONAREM) 36,6 %.

-Chiffre d'affaires annuel : 107 millions d'euros en 2007

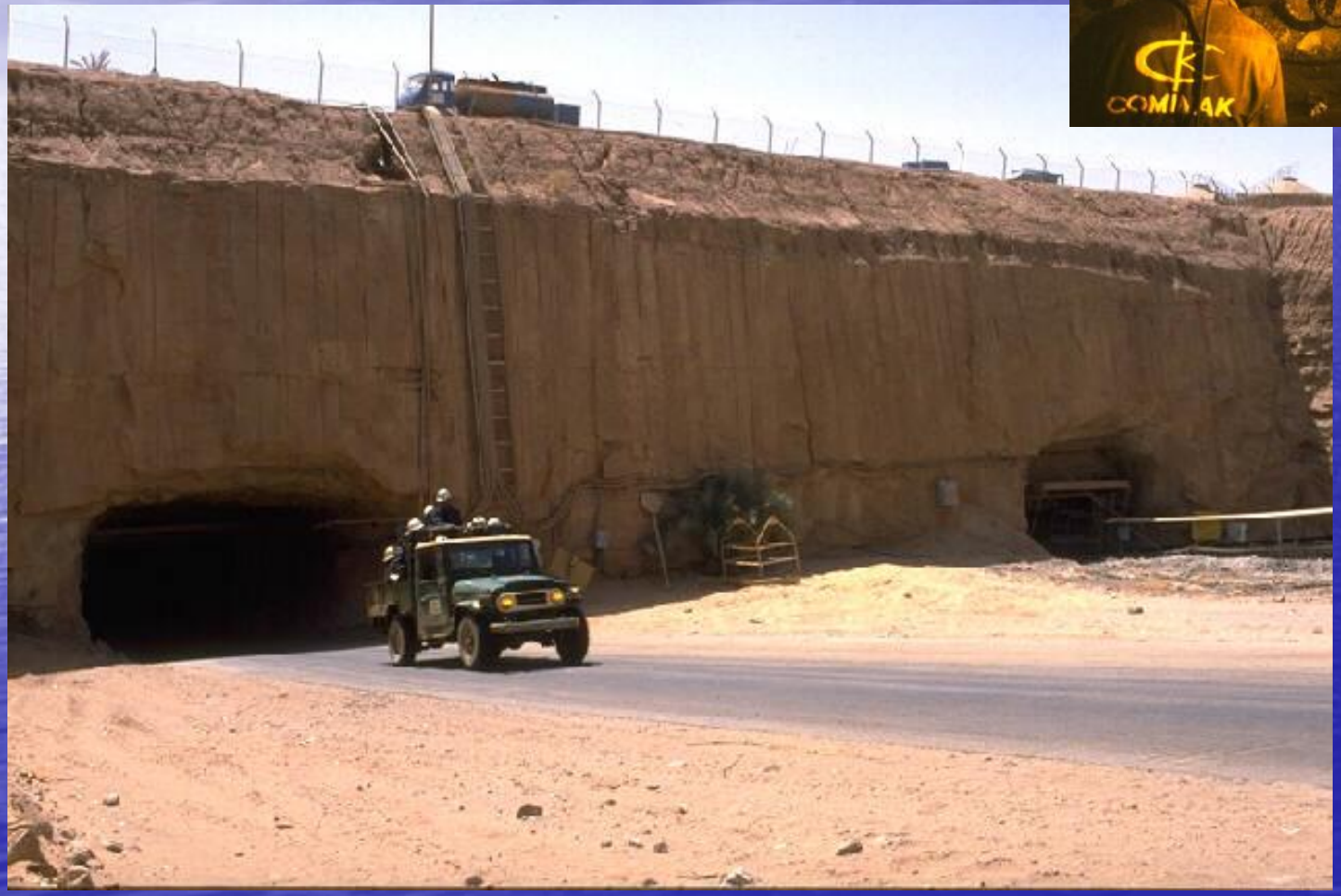
-Production annuelle : environ 1750 t. (2007)

-Production cumulée depuis le début de l'exploitation : environ 46 300 tonnes d'uranium

- Mines à ciel ouvert - profondeur de 50 à 70 mètres.

- Gisement sédimentaire horizontal à 7 km au nord-Ouest de la ville d'Arlit.

Underground uranium mines COMINAK (AREVA)



- Immediately after landing at Niamey airport (Niger), CRIIRAD professional monitoring equipment was confiscated by the police but very small radiation monitors were not

Crédit photo : CRIIRAD, déc 2003

1 / Niger : CRIIRAD and AGHIRIN'MAN show that radioactive scrap metal from the mines and mills is sold on the market

December 2003. CRIIRAD performed gamma radiation measurement with a Geiger Muller counter in the streets of ARLIT City (Niger / Africa).
On the pipe below, gamma radiation was 10 times above natural background

Crédit photo : CRIIRAD, déc 2003

The CRIIRAD laboratory analysed a few grams of radioactive crust from the pipe (Uranium 238 = 10,000 Bq/kg,
Radium 226 = 240,000 Bq/kg). These are tailings from the SOMAÏR uranium mill (AREVA subsidiary).

In ARLIT (Niger) people commonly re-use scrap metal for their everyday life

Crédit photo : CRIIRAD, déc 2003

Year 2009 / Radioactive pipes used for drilling in ARLIT (Niger) Radiation level monitored by AGHIR IN MAN is 49 times above natural value / in France : CRIIRAD press release and letter to AREVA

Picture provided by AGHIR IN MAN June 2009

Year 2009 : the local NGO (AGHIR IN MAN) discovered on the market place (Niger) radioactive liners that were formerly used for the radioactive effluent's ponds of AREVA mills (radiation level more than 100 times above normal)

Crédit photo : AGHIR IN MAN Juin 2009

Ferrailles radioactives provenant de la COMINAK (1 000 tonnes)

Mesures du taux de radiation par l'ONG AGHIR IN MAN, sept 2012 à Arlit (Niger) : 1 800 c/s soit plus de 9 fois le niveau « naturel »

600 tonnes provenant de la SOMAÏR ont déjà été expédiées au Bénin

2 / Niger : radioactive waste rocks from the mine have been used for road construction (and even in dwellings)

Waste rock dump SOMAÏR mine / Niger

Crédit photo : CRIIRAD, déc 2003

Gamma radiation on contact of the soil (100 times above normal)

19 000 c/s

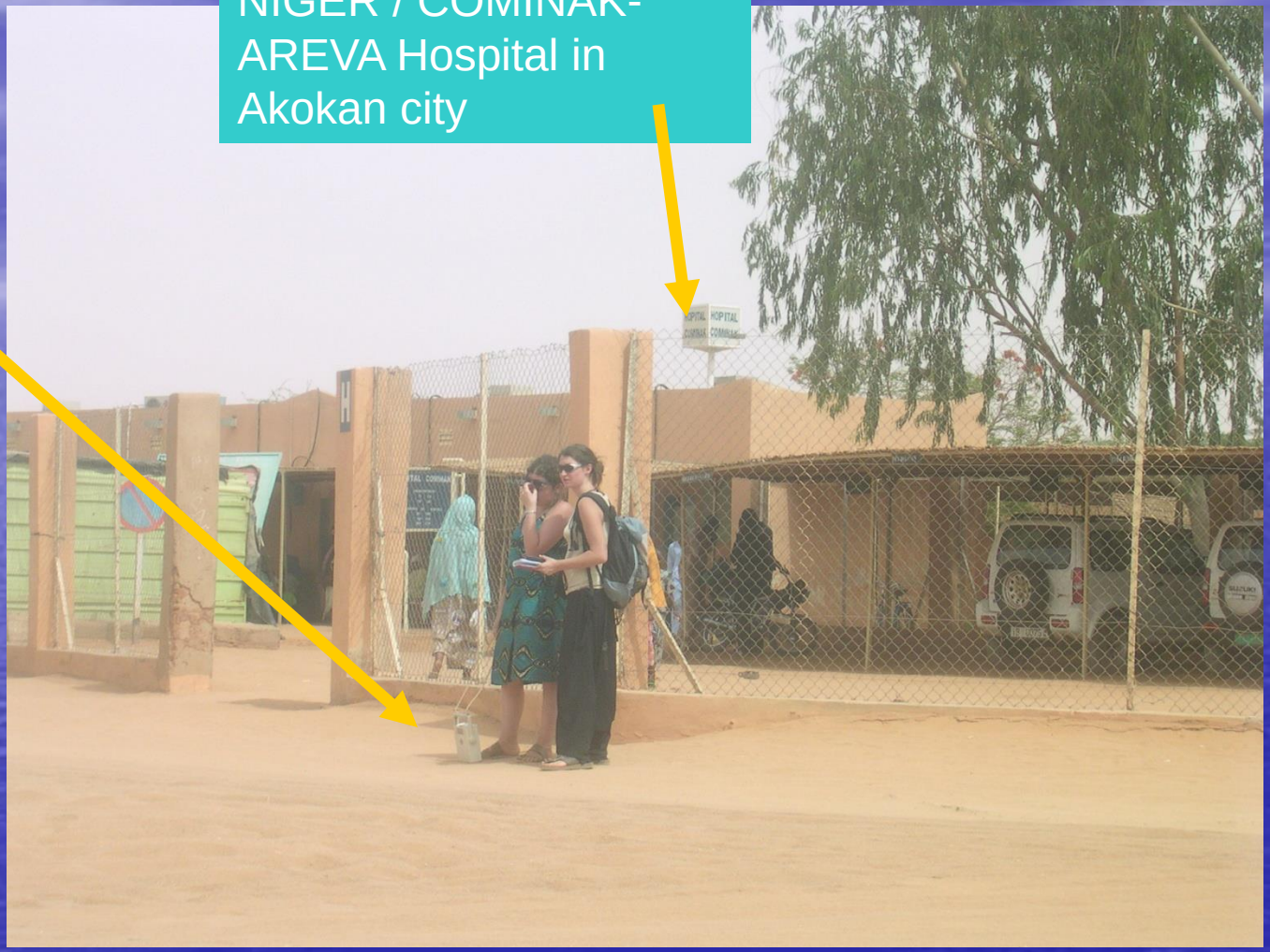
CRIIRAD wrote to AREVA's CEO Mrs Lauvergeon in May 2007.

CRIIRAD got no reply

According to AGHIR IN MAN : the removal of radioactive rocks took place in 2008.

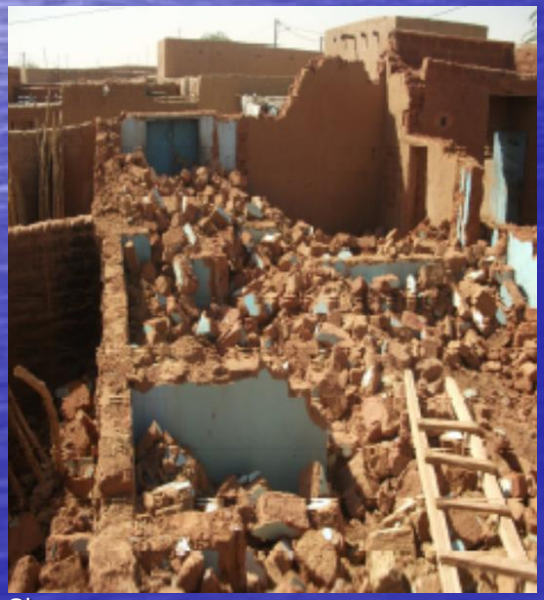
GREENPEACE mission November 2009, other radioactive places detected

NIGER / COMINAK-AREVA Hospital in Akokan city



Crédit photo : C. Chamberland et M. Roche, 2007

2012 : AGHIRIN'MAN is participating into a huge campaign of radiation monitoring in the streets of ARLIT / Houses built with radioactive material from the mine have to be demolished and new houses are built



3A / Use of non-renewable water resources (ex : Arlit, Niger)

- ARLIT : water is pumped from a non renewable resource at a depth of 150 m. About 275 millions m^3 pomped from 1969 to 2004
- SOMAÏR's water consumption increased from 2.7 million m^3/year in 2005 to 4.6 million m^3/year in 2010 (more than 60 % is used for the industrial process)
- SOMAÏR withdraws 1.7 million litres of water for each ton of uranium produced

4 / About 50 million tons of radioactive waste (tailings) are stored in the open air close to the cities of Arlit and Akokan

Radioactive tailings from COMINAK mill (AREVA subsidiary) in Niger
50 hectares / 14 million tons. : Activity above 500,000 Bq/kg dry
Tailings are « stored » in the open air :
No confinment of radon gas and radioactive dust. What about the powerfull winds of the desert and the proximity of the cities (a few kilometers away) ?

5 / People exposure to Radon (a carcinogenic radioactive gas produced by uranium) is exceeding the maximum annual dose limit of 1 milliSievert
in the suburbs of Akokan city

One Becquerel Bq = 1 disintegration per second

Radon concentration in the air discharged by the underground mine vents is about 3 600 Bq/m3 to 18 000 Bq/m3, according to the company

Crédit photo : C. Chamberland et M. Roche, 2007

6 / Empowering local NGO's / The success of CRIIRAD to AGHIRIN'MAN transfer

AGHIRIN'MAN is monitoring radiation and training another local NGO / SOMINA uranium mine / Niger / 2015

Crédit photo : AGHIRIN'MAN et OUGBOUL OUNFAS , 2015

AGHIRIN'MAN is monitoring radiation and training another local NGO / Detection of radioactive scrap re-used by the community / SOMINA uranium mine / Niger / 2015

Crédit photo : AGHIRIN'MAN et OUGBOUL OUNFAS , 2015

Since 2017, AGHIRIN'MAN is editing its own magazine

« MAI-MAGANA »

« Coordination de la société civile d'Arlit »

Niger

INDUSTRIES EXTRACTIVES :

URANIUM, BONHEUR OU MALHEUR DES PEUPLES ?

BULLETIN D'INFORMATION DE L'ORGANISATION NON GOUVERNEMENTALE POUR LA PROTECTION DE L'ENVIRONNEMENT ET LE MIEUX-ETRE (Aghirin'man)

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« L'exploitation et la gestion des ressources naturelles et du sous-sol doit se faire dans la transparence et prendre en compte la protection de l'environnement, du patrimoine culturel ainsi que la préservation des intérêts des générations présentes et futures » (Constitution du Niger article 149).

N° 01 -JUIN 2017

INTERVIEW

« LES NIGÉRIENS NE PROFITENT PAS DE LEUR URANIUM... »,

DIXIT ALMOUSTAPHA ALHACEN, PRÉSIDENT DE L'ONG AGHIRIN'MAN ET PRÉSIDENT DE LA COORDINATION DE LA SOCIÉTÉ CIVILE D'ARLIT

ALIMENTATION EN EAU POTABLE DE LA VILLE MINIÈRE D'ARLIT

ENTRE LA SPEN ET LA SEEN, QUI NE JOUE PAS SON RÔLE ?

LA QUALITÉ CHIMIQUE ET RADIOLOGIQUE DE L'EAU EST-ELLE ASSURÉE ?

FOUILLER DANS L'HISTOIRE POUR PRÉPARER L'AVENIR

AGHIRIN'MAN's president, Almoustapha ALHACEN at a public meeting in France during the annual meeting of the CMU (Collectif Mines d'Uranium)

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AGHIRIN'MAN's president, Almoustapha ALHACEN during the annual meeting of the CMU (Collectif Mines d'Uranium)

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AGHIRIN'MAN and CRIIRAD in South-Africa during an international conference about "Nuclearization of Africa" 2015 /

Radiation left by Gold mines

Keywords for an efficient cooperation between organisations from the « South » and « North » :

« sincerity, integrity, profesionnalism, continuity, trust, commitment, human, listening, mutual learning, understanding each other, fighting, interculturality, concern, patience, courage , credibility, local-global, national-international »